



UCL

BHP Billiton Sustainable Communities/
UCL Grand Challenge
Symposium Series

Closing the Gap: Aligning strategies towards sustainable resource use



A Discussion Document

“ This is one of the more important subjects facing us over next few decades: how global resources will meet global demand and the impact on the global economy ”

“ How do we set up a governance accountability framework that allows local action to take place without influencing or adversely affecting global action? ”

“ We have to find a way of coming together, of brokering conversations and of working from various different political and social perspectives ”

Defining the problem - What do we mean by sustainability and what do we want to be sustainable?

In October 2012, the UCL Grand Challenges and UCL Institute for Sustainable Resources (UCL ISR) convened a multi—stakeholder discussion to debate the challenges facing more sustainable resource use, led by leaders in their respective fields. The programme for the discussion, and the names of the speakers, are given in Appendix 1. The document that follows summarises the main themes of the discussion and is designed to pose questions for further work, analysis and debate. The discussion was held under the Chatham House Rule so that the views expressed and reported below are unattributed.

One of the first tasks in any debate around this topic is defining the problem we are looking to address.

While there is consensus between industry, government, civil society and academia that the challenge of how we continue to use natural resources over the coming decades, including the effects of that resource use on the natural environment, is one of the greatest challenges the global community has ever faced, there is greater debate over what we mean by 'sustainability' and which natural resources are most critical.

Perhaps more critical to this debate however is not sustainability, the capacity for continuance, but what we want to be sustainable; economic growth, development or the broad range of environmental functions that contribute to both, to name just three.

Economic development and sustainable development are sometimes viewed as opposing camps, but rather they are part of the same problem, the need to allow

for growth in human welfare without exceeding environmental limits.

The challenge could perhaps be redefined as how to achieve sustainable prosperity, in keeping with the spirit of the Brundtland¹ definition of sustainable development – development which meets the needs of the present without compromising future generations – but allowing for the need for economic development.

Semantics aside, the problem remains. The growing global population, the increase in the global middle-class and the proportion of population living in cities, are placing increasing pressure on the planet's resources.

Exact figures vary, but even back of the envelope numbers indicate the scale of the issue is unprecedented.

As a rough guide, while global population is anticipated to grow from 6 to 9 billion people by mid-century, more critical to the resource debate is the fact that the proportion

of population categorised as middle class (spending between \$10-100 per day) is expected to increase five-fold in the same period. Furthermore, as incomes increase, and standards of living improve, more of the global population will seek to live in urban areas, with up to 75% of the population predicted to be living in cities by 2050.

However, the pressures of meeting this growing demand will not affect all resources equally, and not all resources are equally scarce.

Concern is now greater for the predominantly biological resources, food, land, water and energy.

While it is possible to manage these types of resources so that we only take what we need and the system replenishes itself, to do so will not only require better governance and cooperation, but nothing less than a radical change in our collective behaviour away from the consumer driven culture which has dominated measures of growth in the 20th century.

Resources in demand

Water

“By 2030, under an average economic growth scenario and if no efficiency gains are assumed, global water requirements would grow from 4,500 billion m³ today to 6,900 billion m³, a full 40% above current accessible, reliable supply.”²

Food

“Annual cereal production will have to grow by almost a billion tonnes (2.1 billion tonnes today), and meat production by over 200 million tonnes to reach a total of 470 million tonnes in 2050, 72% of which will be consumed in developing countries, up from the 58% today”³

Energy

“Even while oil reserves are apparently increasing, the percentage available for production is going down. Production at existing oil fields around the world is declining at rates of about 4.5% to 6.7% per year”⁴

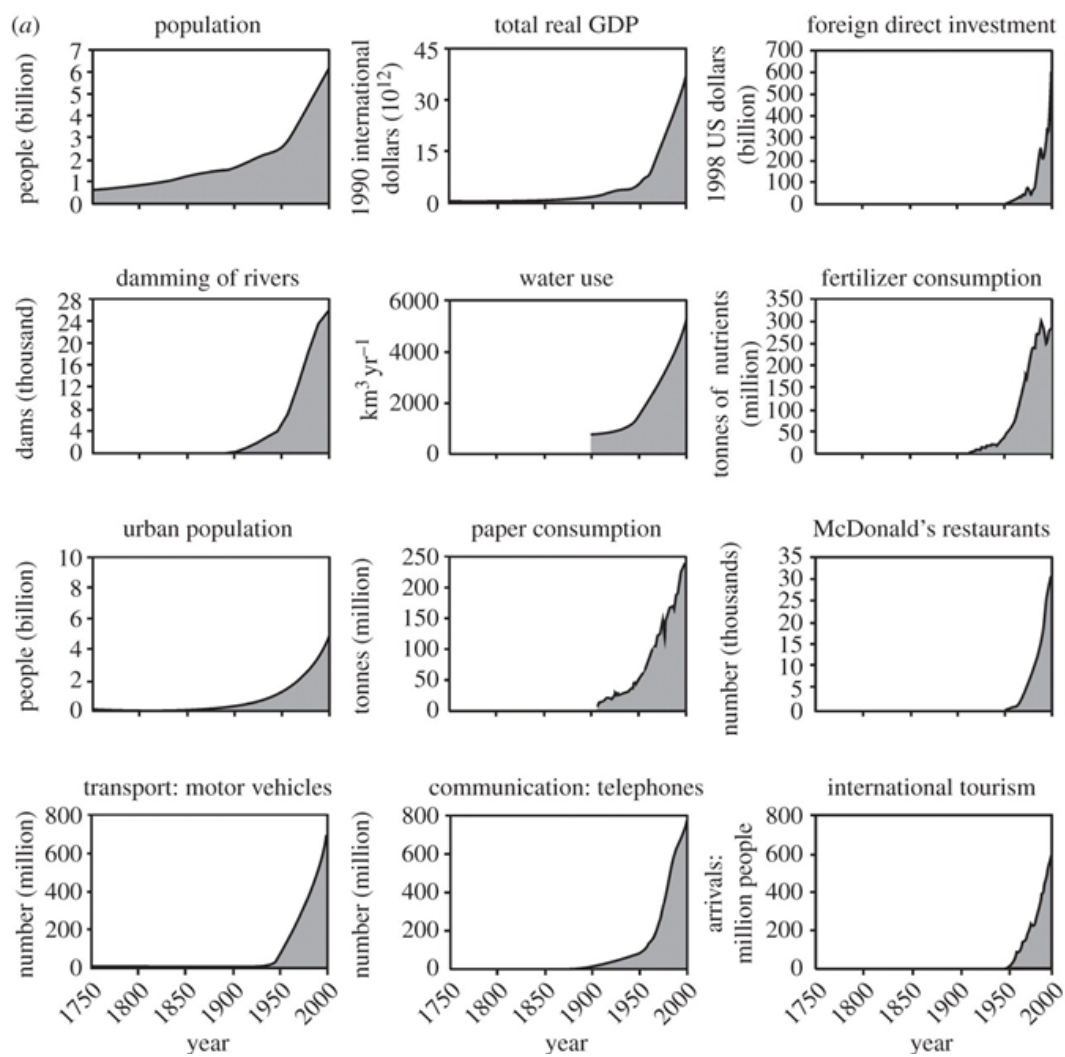


Figure 1: The increasing rates of change in human activity since the beginning of the Industrial Revolution, most rapidly from the 1950s. Steffen W et al. ⁵

Hearts and minds - creating behavioural change

Creating behavioural change is no easy feat, but the consensus at 'Closing the Gap' was that a radical new solution is required, one that requires us to say GDP is no longer the right measure for how well a government is doing in addressing resource sustainability.

But what measures should be used to replace it?

Some say we need to change the way we view resources, moving away from a linear concept of consuming something to recreating, reinventing and reusing things in different forms. Adding that improvements in technology could solve much of the problem.

Others, meanwhile, suggest GDP needs to be replaced with intrinsically human values, placing the interactions between people ahead of having more 'stuff'. Instead identifying indicators that offer measures of development which account for social and environmental factors as well as economic indicators of wealth.

Historically such measures of wellbeing have not been given the same weight as economic growth.

So far the only response has been through initiatives such as 'Beyond GDP'⁶ but this has had little impact on the current emphasis on growth and growth at any cost, and practically no purchase in practical political debate.



Local v Global - Accountability, governance and taking responsibility

Equally important to the debate is the question of who and what will be the drivers or incentives to bring about this behavioural change.

Some of the difficulty in addressing this question of key actors, and perhaps part of the reason for a lack of action to date, is a conflict between national and international action.

Many of the problems of resource scarcity and sustainable development are global in nature but many of the measures and solutions offered are at the local level.

For example, it should be possible to feed a world population of 9 billion, at the same time only taking from the natural system what we need and allowing the system to replenish itself.

However, this would require maximising production of the right crops in the right areas while leaving other areas for conservation, creating a new political problem as governments could become wholly dependent on other countries for the entirety of their food supply.

This requires strengthening of global governance capacity, something that is currently beyond international bodies such as the UN, partly because such international bodies can act in a coordinating role, but have little or no influence over sovereign processes.

At the same time there is also a clear need for local action and local management of strategic resources, decision making that will be influenced by external or international decision making. In this sense it becomes very difficult to separate the complex web of local versus global solutions.

An alternative may be to better link local to global through multiple accountability mechanisms, a method which would spread influence between other actors including media, academia, business and civil society.



While much of the debate to date has focused on policy and the role of government, each of these groups also has a critical role to play in changing collective behaviour and resource use patterns.

Business, particularly big business, could potentially have an influential role to play as it crosses the boundary between local and global. Businesses not only influence development in individual economies, for example through working with local suppliers, but are also weighty enough to influence major international decision making.

But what are the incentives for big business to put resource sustainability on its agenda?

At present the real business incentives for sustainable commodity production are weak, but the situation is far more complex than that.

Companies, particularly those involved in resource production (from mining, to agriculture, to forestry) don't have a business in a world that is 4°C warmer. However, the intricacies of international markets, not to mention their contribution to the global financial system (from shareholders to taxes and pension fund contributions) means they cannot change their business overnight.

This is a level of complexity that has not yet been factored into the discussion but that must be accounted for if change is to be realised.

The picture is not all bleak however, and companies are already beginning to place sustainability at the centre of their business models. For these companies, economic development and sustainable development are aligned in a strategy which creates long term shareholder and stakeholder value by placing the emphasis on making a reasonable profit over a longer timeframe, rather than a quick buck now.

And what of the role of other groups?

Civil society should continue to have a strong voice in this debate, and can play a critical role in influencing policy and business as it has done in the past when it engages constructively. Media, and recently social media, can play an equally influential role.

Academia and science in particular, however, has lost some of its influence in the debate in recent years, a fact that it will have to work hard to overcome.

In reality, the strongest strategy will involve a combination of all of these groups, setting the new challenge of getting them to work together.

Bringing it all together – aligning strategies towards sustainable resource use

So how can we better align strategies and better work together to solve the global challenges of more sustainable resource use?

It is clear, from the Closing the Gap discussion, that no one sector has the necessary skills, power and reach to tackle these issues alone.

Instead a new form of leadership is required, one which has the ability to broker conversations between these different parties, to promote longer-term thinking and to bridge the gap between local and global.

Is this an area where science can redeem itself, where academia can regain the role of advisor and advocate on these critical issues?

Whichever role each sector takes there are two futures before us: one in which the global community comes together, and economies converge to allow for better agreements through more equitable international process; the other in which resource protectionism and resource wars increase in frequency as countries seek to protect their assets, not for the world but for themselves.

The transformation is going to have to encompass every element of the economic and political process and every sector of society.

Fortunately in all these dimensions we are seeing progress; unfortunately this progress is not moving fast enough.

What can we do?

“We have a huge task to do, we won’t do all of it but we hope to make some progress” Paul Ekins, Director, UCL ISR

At UCL we hope to be able to begin tackling some of the issues that have been raised during the ‘Closing the Gap’ debate.

The UCL ISR is being developed as a cross-university centre bringing together academics from a range of disciplines to tackle the issues of sustainable resource use, but more than this we hope to get stakeholders beyond academia talking to one another.

Meanwhile, the UCL Grand Challenges provide a mechanism through which UCL’s specialist expertise can be brought together to address aspects of the world’s key problems.

One of our key priorities is to make progress on the science of sustainable resources - what is it and how does it vary across time and space.

Wider participation is critical to extending the reach of our science, and along with the UCL Grand Challenges, UCL ISR will continue to develop this Symposium Series to push forward the debate on sustainable resource use.

The next Symposium in the series will focus on the Grand Challenge of Sustainable Cities, taking note of the needs of growing urban populations and the stresses these place on the natural environment.

We hope you will join us on our journey.



Appendix 1

Closing the Gap programme

Welcome and Introduction

Prof David Price, *Vice Provost for Research, UCL*

Prof Paul Ekins, *Director UCL Institute for Sustainable Resources*

Panel presentations: 'Approaches to sustainable resource use'

Prof Sir David King, *Director, Smith School of Enterprise and the Environment and former UK Chief Scientific Advisor*

Caoimhe Buckley, *Head Public Affairs Europe, BHP Billiton*

Tom Burke, *Founding Director of environmental consultancy E3G*

Prof Georgina Mace, *Director, UCL Institute for Biodiversity and Environment Research*

Moderated by Julian O'Halloran *Environment Correspondent, BBC*

Open forum discussion: 'Aligning strategies towards sustainable resource use'

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References

1. World Commission on Environment and Development (1987) *Our Common Future*, Oxford: Oxford University Press
2. 2030 Water Resources Group, (2009), *Charting Our Water Future*, McKinsey & Co
3. UN FAO, (2009) *How to Feed the World in 2050*
4. Murray, J. and King, D. (2012) *Oil's Tipping Point has Passed*, Nature, Volume 481, 433-435
5. Steffen W et al. (2011) Phil. Trans. R. Soc. A 2011;369:842-867
6. BeyondGDP <http://www.beyond-gdp.eu/index.html>

More information on the UCL Grand Challenges and the UCL ISR can be found at:



www.ucl.ac.uk/grand-challenges

www.ucl.ac.uk/sustainable-cities



www.ucl.ac.uk/sustainable-resources

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