

Citizens in an Interconnected and Polycentric World

GLOBAL TRENDS

2030

‘The EUISS has produced a groundbreaking report which for the first time looks at the impact of an increasingly empowered global citizenry on the international system. The report paints a world which is no longer a relatively static one of states, but delves deep into the drivers and forces – such as the communications revolution – that are moulding and constraining state behaviour, not the other way around.’

Mathew Burrows, National Intelligence Council

‘The objective of this report, coordinated by Álvaro de Vasconcelos, is to establish what will be the major world trends prevailing in the ongoing phase of transition that has characterised the first decade of the twenty-first century. The report correctly draws a picture of global multipolarity. Of particular interest is the scope of its content and research, which was conducted not only in the developed world but also in the major poles of the emerging world. The analysis of the report is based on thorough and far-reaching research which is very useful to understand the complexities of the present global context.’

Marco Aurelio Garcia, Special Foreign Policy Advisor to the President of Brazil

‘The EUISS ESPAS report is comprehensive and thought-provoking. I look forward to the debate it will generate in my country as well as in the others discussed.’

Radha Kumar, Director, Peace & Conflict Programme, Delhi Policy Group



European Strategy and Policy Analysis System (ESPAS)

**Global trends 2030 –
Citizens in an interconnected and
polycentric world**

This report, edited by Álvaro de Vasconcelos, contains the findings of the European Strategy and Policy Analysis System (ESPAS) research project. The EUISS was commissioned to produce the ESPAS Report on Global Trends 2030 by an EU inter-institutional task force. An interim version of this report was presented to the European Union in October 2011.

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The findings of this ESPAS Report are the responsibility of the EUISS, and do not necessarily express the opinions of the EU institutions. The EUISS was commissioned to produce the ESPAS Report on Global trends 2030 by an inter-institutional task force, with full respect for the intellectual independence of the EUISS.

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Foreword from the ESPAS Inter-Institutional Task Force

The 2010 European Union Budget provided for the European Commission to undertake a Pilot Project over two years, with the aim of exploring the possibility of establishing ‘an inter-institutional system identifying long-term trends on major policy issues facing the EU’. This Pilot Project was proposed by the Parliament and adopted jointly with the Council, as the twin arm of the budgetary authority.

In practice, the central objective of the initiative is to develop a network for regular co-operation between officials in the various EU institutions whose daily work involves researching forward-looking policy trends. As a first step in this process, the Paris-based EUISS was commissioned to do initial research, given its previous experience working in the field of long-term trends. Its contribution was to provide an initial assessment of the long-term international and domestic political and economic environment facing the EU over the next 20 years.

The EUISS report ‘**Global Trends 2030: Citizens in an Interconnected and Polycentric World**’, edited by Álvaro de Vasconcelos, contains the findings of the project. Its uniqueness lies in the fact that not only is this the first time that the EU institutions have called upon an outside body to give an independent view of long-term global trends, but also that the work was undertaken by a team of European researchers looking outward in search of a global perspective on the challenges ahead.

In order to ensure this perspective, the debates held in the various regions were organised with local think tanks, involving local experts on global trends from the academic, civil society and policy spheres. You will find the EUISS report and its relevant supporting documents on the ESPAS website (see, in particular, the Executive Summary).

The EUISS report raises a wide range of issues. Its aim was not to predict exactly how the world will look in 2030, but rather to map major, existing trends that are likely to shape the future and will need to be taken into account by the Union as it defines coherent strategic options for the next governance cycle.

The report identifies several global trends that will shape the world in 2030. They include:

- The **empowerment of the individual**, which may contribute to a growing sense of belonging to a **single human community**;
- Greater stress on **sustainable development** against a backdrop of greater **resource scarcity** and persistent poverty, compounded by the consequences of climate change;
- The emergence of a more **polycentric world** characterised by a shift of power away from states, and growing **governance gaps** as the mechanisms for inter-state relations fail to respond adequately to global public demands.

As this project goes to the next phase - a so-called 'Preparatory Action', with a view to putting in place an inter-institutional system at EU level by 2014 - it would be of great interest to have feedback from all individuals and organisations who read and reflect upon this document, to learn whether you share the basic analysis set out. Are the main global trends identified the right ones and the most important? Are there other long-term changes that need to be addressed? Please let us have your views. These will be helpful in contributing towards input for determining the challenges and the options for the European Union over the next decade.

ESPAS methodology

The EUISS, in its role as the European agency for strategic studies, was identified as the core institution of the trend-monitoring European Strategy and Policy Analysis System (ESPAS), which is steered by a ‘quadrilateral’ inter-institutional task force, composed by the Bureau of European Policy Advisers (BEPA), the European Parliament (EP), the Council of the European Union and the European External Action Service (EEAS). The eventual aim is to build a permanent EU forecasting capacity based on an inter-institutional and international network. As part of a one-year pilot study, ESPAS was tasked with producing two separate reports:

- A first report assessing the long-term, international and domestic, political and economic environment facing the European Union over the next 20 years;
- A second report identifying the main policy challenges and choices likely to confront EU institutions during the 2014-19 institutional cycle.

The ESPAS team systematically sought the close involvement of experts and think tanks from outside Europe, namely from the United States, Brazil, China, India and Russia, but also from Africa, the Arab world and Turkey.

ESPAS used a mix of in house and contract-based expertise, and fully exploited the expertise of EU institutions in the areas under study. Brainstorming and review workshops drawing from a broader pool of expertise, and involving practitioners from EU institutions and the EEAS where appropriate, have also contributed to completing and scrutinising research and data-collection findings.

Framework

Research has been organised by horizontal issue areas (core issues) and regions. Global governance has been dealt with as a third overarching research area. Researchers were asked to review and assess the existing literature forecasting global trends using this analytical grid. The interim product resulted in twelve research papers, and an annotated list of the main challenges and problems identified by the experts. These interim contributions constitute the backbone of this report.

The *ESPAS Stage Two Guidelines* were produced on the basis of the research, and presented key hypotheses. This document was presented and discussed at the Sixth Inter-Institu-

tional task force (on 19 April 2011). A report on the preliminary ESPAS findings was produced after an intensive two-day discussion among the project experts and a peer reviewer.

Regional conferences

The preliminary ESPAS findings were discussed at regional conferences in each of the seven regions identified by the inter-institutional task force. Conference programmes have been closely linked to the research and networking requirements of the project. The main role of the conferences has been to discuss the key findings of the ESPAS preliminary report, which were circulated to the experts participating at each ESPAS research conference. The debates were organised with local think tanks, bringing together experts on global trends from academia, civil society organisations, and civil services, most notably policy planning departments. Their contribution has played a major role in ensuring that the report has a truly global perspective rather than a Eurocentric bias. The conferences were held in 2011:

- North Africa, the Middle East & the Gulf Cairo, 30 May
- Sub-Saharan Africa Pretoria, 5 July
- United States & North America Washington D.C., 11 July
- China and & Asia Pacific Beijing, 20-21 July
- Brazil & South America São Paulo, 1 September
- Wider Europe Moscow, 9 September
- Ankara, 11 September
- Indian Sub-continent & Central Asia New Delhi, 24 September

Side events

Brainstorming sessions and working group meetings were also held at the margins of some regional conferences:

- Brainstorming Sessions
Brasilia, 2 September
Moscow, 9 September
- Working group meetings
New Delhi, 25-26 September

A final conference was organised in Brussels to allow for a critical overview and comment of the main findings, and for a discussion of its implications for the EU. The inputs gathered in these conferences and side-events were incorporated into this report, *Global Trends 2030*.

Focus groups

Given the central role of younger generations in the recent democratic developments across the Middle East and around the world, particular attention was given to the role and example that empowered and connected youths might set in their societies today and in decades to come. Young students, activists and members of civil society were therefore invited to attend *ad hoc* discussions (focus groups) on questions of identity, the future challenges and opportunities facing their countries, and political participation and social networks. The main goal was to assess how they view important social, political and economic issues and the use of new technologies in their own country and abroad. Groups usually consisted of five to ten individuals, aged 20-30. Participants were chosen according to the ‘snow ball’ method (pointed out by local contacts because of their profile). The selected ‘young leaders’ were men and women who are expected to have a considerable impact on their countries and beyond because of their activities in business (innovative entrepreneurs), societies (social campaigners or activists), and politics (young politicians, politically engaged individuals). The focus groups were held in Egypt, Pakistan, India, China, the US, Brazil, France, Russia and Turkey.

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Executive Summary

Preamble

The following is a summary of the main findings of the ESPAS research project, grouped under three key headings. The aim was not to predict how the world will look in 2030 but rather to map major, existing trends that are likely to shape the future and must be taken into account by the European Union in its attempt to define coherent strategic options for the next governance cycle.

The research is based on 12 research papers covering six core issues (climate change and natural resources; energy; information technology; economic development; migration; and disarmament) and seven world regions. As its title suggests, the report deals primarily with identifiable trends taking shape across nations and continents rather than focusing on international relations; as befits the normative civilian nature of the EU, the report focuses clearly on the likely evolution of citizens' rights, demands and expectations, as opposed to adopting the more traditional focus on inter-state relations.

The first step in the research process concentrated on analysing the existing literature and identifying knowledge gaps; in the second phase, researchers attempted to fill those gaps, and other experts were engaged to mobilise the best expertise available worldwide. The global trends identified during the first stage of the research process were submitted to external scrutiny, in conferences held throughout the seven regions identified by the inter-institutional task force overseeing the project. The input from these conferences was incorporated into the report 'Global Trends 2030: Citizens in an Interconnected and Polycentric world'. In order to ensure a genuinely global rather than limited Eurocentric perspective, the debates held in the various regions were organised with local think tanks, and involved local experts on global trends from the academic, civil society and policy spheres. Analysis of the impact of these trends on the EU and its policy options to deal with them are addressed in a second report.

Three main global trends

There are three main global trends emerging today that will shape the world in 2030: the empowerment of individuals, which contributes to a sense of belonging to a single human community; greater stress on sustainable development against a backdrop

of greater resource scarcity and persistent poverty, compounded by the consequences of climate change; and the emergence of a more polycentric world characterised by a shift of power away from states, and growing governance gaps as the mechanisms for inter-state relations fail to respond adequately to global public demands.

Part I - The empowerment of individuals: a global human community but a growing expectations gap

The empowerment of individuals: key drivers

According to the United Nations (UN), by 2030 the world population will reach 8.3 billion. Millions of these individuals are being empowered by the social and technological progress of the last decades. The main drivers of this trend are, first and foremost, the global emergence of the middle class, particularly in Asia, near-universal access to education, the empowering effects of information and communications technology (ICT), and the evolution in the status of women in most countries. These transformations are increasing the autonomy of individuals and powerful non-state actors *vis-à-vis* the state.

In 1990, about 73 percent of the world population was literate. In 2010, global literacy rates reached 84 percent and the literacy rate may pass the 90 percent mark in 2030.¹ Women are becoming empowered throughout the world, a trend that is likely to continue into the future. Women now have better access to education, information, and economic and political opportunities, all of which contribute to greater gender equality. However, progress is very uneven from region to region and between different social groups, with girls, indigenous, immigrant or low-caste women remaining especially vulnerable.

The middle class will increase in influence as its ranks swell to 3.2 billion by 2020 and to 4.9 billion by 2030. The middle class will be the protagonist of the universal spread of information societies. Citizens will be interconnected by myriad networks and greater interpersonal trans-national flows. It can therefore be assumed that the citizens of 2030 will want a greater say in their future than those of previous generations.

More and more people will live in the ‘information age’ as improved technology that is more portable and affordable makes information more universally accessible. The digital divide will not disappear over the next 20 years, but it will narrow considerably. By

1. See: UNESCO Institute for Statistics at <http://stats.uis.unesco.org/unesco/TableViewer/tableView.aspx?ReportId=210>, which provides data up to 2009; the projection for 2030 is based on predictions in the Roland Berger Trend Compendium 2030, which predicts that primary school enrolment will be above 90% by that year. R. Berger, *The Trend Compendium 2030, Global Knowledge Society*, at http://www.rolandberger.com/expertise/trend_compendium_2030/global_knowledge_society.html.

2030, it is estimated that more than half of the world's population will have internet access. However, new information technologies will remain unavailable to many people because of illiteracy and lack of access to electricity, although in regions as deprived as Sub-Saharan Africa the availability of mobile phones may compensate for limited access to electricity.

Converging values and demands but risks of extremism

By 2030, the demands and concerns of people in many different countries are likely to converge, with a major impact on national politics and international relations. This will be the result mainly of greater awareness among the world's citizenry that their aspirations and grievances are shared. This awareness is already configuring a global citizens' agenda that emphasises fundamental freedoms, economic and social rights and, increasingly, environmental issues. The citizens of 2030 will be very much more aware that they are part of a single human community in a highly interconnected world. This may signal the rise of a new 'age of convergence.'

At the same time, however, distinctive cultural identities will remain. Indeed, democratic aspirations will tend to be perceived as compatible with, and even as facilitating, a greater awareness of national and sub-national cultural identities. The decline of theories of conflict between civilisations and cultural relativism is therefore likely, although economic and social difficulties may reverse this positive trend in some countries, and extremist identity politics and xenophobia will continue to leave a mark on some parts of the world. Likewise, the refusal of the right to cultural and religious freedom may promote radicalisation and the rise of nationalism in some areas of the globe.

Whatever the factors dividing people, the pressing issues that must be confronted – poverty, inequality, corruption, disease, climate change, water and energy scarcity, war and humanitarian disasters, and the proliferation of weapons, including of small arms – will be perceived as shared challenges by a global public with access to new instruments of communication that enable it to express its concerns and dissent.

The convergence of concerns and increased vocalisation of demands will contrast sharply with governments' capacity to deliver public goods, particularly those relating to improving quality of life. This will generate an expectations gap that may become a source of tension and social conflict and which can be aggravated by ineffective economic governance. Although such a gap may ultimately promote greater stability by forcing societies to work towards more effective and democratic policy-making and accountability

processes, it may initially become a source of friction, conflict and even revolt, and in some instances the result of such turmoil may be resurgent populism and recurring conflict.

Resurgent nationalism will remain the most potent challenge to democracies around the world, and may cause societal fragmentation and conflict. Equally, extremism will not disappear and will remain a major threat to basic rights and freedoms; but it will be a minority phenomenon, and extremist nationalists are unlikely to rise to power in any of the states performing a greater international role. Although some view the ‘Chinese model’ as an alternative, it is not likely to be sustainable in the long term. Indeed, the emergence of a credible global alternative to a governance model based on human rights and democracy is unlikely.

Demands for Political Participation but Dangers of Populism

The empowerment of individual and non-state actors, particularly civil society organisations, will have a significant impact on how politics is conducted. There will be increased civil society pressure for direct participation in the political arena, in which the central influence of traditional party politics and governance structures will tend to wane.

Greater participation and knowledge coupled with a growing expectations gap may lead to tensions, revolt and conflict. The youth movements of 2011 – from the ranks of which many members of the power elites of 2030 are likely to emerge – are aware of the problems facing representative democracies. The traditional media will be forced to adapt to ‘citizen journalism’ that makes use of social networks, blogs and websites. Participatory forms of journalism are already part of a broader push by citizens to participate in public life. New participatory mechanisms will likely be introduced by democratic and authoritarian regimes alike in response to pressure ‘from below.’

While such mechanisms may have positive effects, they may also threaten representative institutions and democratic political parties, and open the way for new forms of radical populism. The ‘scapegoating’ that often accompanies nationalist populism may be a temptation for authoritarian regimes under stress from dissident forces. In democratic societies, new forms of protest and anti-establishment politics may emerge in response to a growing expectations gap, deepening income disparities (the squeezing of the middle class), and the power shifts that are limiting the action of countries that have been used to acting as major global players. In the US, the radical introversion and isolationism that is currently manifested by the rise of populist movements – with their appeals to

old myths that offer people a false sense of security – exemplify how the deep changes in the political, social and economic spheres currently underway may destabilise traditional liberal democratic politics.

Internet users are likely to become more engaged in politically-motivated networking, and will demand unfettered access to the internet. But this will also increase threats to privacy: internet companies are driven by economic interests, and citizens are therefore vulnerable to the abuse of stored information. The debate about privacy and accuracy of information will become more acute. Over the next two decades, the cyber sphere is likely to become an arena of conflict and tension between states of all political stripes, not least among those for which cyber security is a key component of intelligence and military strategy, and also between individuals or private companies. It is likely that some governments will be more concerned with cyber security, control, surveillance and regulation than with protecting freedom of access.

Part II. Greater human development but inequality, climate change and scarcity

A rising middle class but persistent poverty and inequality

Abject poverty is likely to continue to decrease, and increasingly affluent societies driven by a burgeoning middle class will emerge in Asia and Latin America. However, the consequences of the current economic crisis may partially reverse this trend, and overall inequality will tend to increase. By the third decade of the century, Africa is also likely to witness the rise of a growing middle class as millions are lifted out of poverty. But the Millennium Development Goals (MDGs) will probably not be fully achieved by the target year 2015. Poverty and social exclusion will still affect a significant proportion of the world population.

In spite of progress, weak education systems and the prevalence of disease, both epidemic and non-epidemic, will remain a major burden for human development. Current economic policies and global patterns of development suggest that areas of extreme wealth and dire poverty will continue to coexist. Corruption will severely hamper sustainable development, constituting one of the main hindrances to social inclusion. The financial crisis of 2008 could have an enduring impact on living standards in Europe and the US, creating a category of ‘new poor,’ shrinking the middle class and triggering new migratory flows, as well as a brain drain from impoverished regions in EU countries.

The current growth model is coming under increasingly critical scrutiny around the world. A central issue for the future is the extent to which the major economic powers of the past fifty years – the US, Europe and Japan – will be capable of reformulating their growth model in a sustainable direction, and building new competitive advantages.

Climate change and scarcities: the challenges to human development

Climate change will have serious consequences and affect living standards and public safety by exacerbating water and food scarcity. Environmental degradation will continue to provoke humanitarian disasters, including desertification and floods of increasing magnitude. The severest impact will be felt in China, South Asia and the Sahel, where millions of people will be displaced; but no region of the world will be spared. Humanitarian crises due to water scarcity and related food and health emergencies, some affecting millions of people, may become recurrent, particularly in some parts of Africa.

Competition for resources is likely to exacerbate tensions and trigger conflicts. Energy crises will heighten the sense that the world is entering an ‘age of scarcity.’ As the consequences of climate change and scarcity are felt more and more acutely, there will be a growing realisation that this is indeed a global problem that concerns and affects all nations and peoples. The prevailing model of development may consequently be called into question.

In response to climate challenge, governments have become more willing to finance research and development (R&D) in clean energy and efficiency-related technologies. But the impact that this will have in reducing climate change significantly is likely to be insufficient. Looking forward to 2030, the pace of change remains uncertain due to the wide range of possible technology and policy scenarios. Making substantial progress in limiting the impact of climate change will require immediately scaling up the deployment of existing clean technologies and significant increases in energy efficiency. The transformation of energy systems to address climate change concerns may be described as the ‘third industrial revolution,’ bringing transformation to global production systems, especially in the energy sector.

Human security: protecting citizens

State security will remain a key issue into 2030, but it is not likely to dominate the international agenda. Wars among great powers are highly unlikely, given their over-

riding interest in preserving stability and sustaining growth to meet the needs and expectations of their citizenries. A major conflagration involving chemical, biological, radiological or nuclear weapons (CBRN) is not likely to happen over the next two decades. The focus of long-term strategic planning is on global challenges such as proliferation (including by non-state actors), cyber security or instability emanating from failing states – humanitarian crises, piracy and organised crime – and on the protection of natural resources and access to energy. But the possibility of inter-state conflict cannot be discounted entirely.

Border tensions, particularly in Asia, could trigger serious inter-state conflict if measures are not taken to address underlying causes. Looking ahead to 2030, the border tensions between China and India over water resources have the greatest potential to disrupt international peace. Based on current trends, trouble is most likely to emerge as a result of the China-Vietnam conflict over the disputed islands in the South China Sea; the Indo-Pakistani conflict over Afghanistan; the conflict between Algeria and Morocco over the Western Sahara; the problems emerging as a result of the possible collapse of North Korea; and unresolved conflicts in Eastern Europe.

Tensions over raw materials may also cause conflict and require new forms of crisis management. State fragility and conflict compounded by pervasive and possibly growing income inequality and a massive increase in the urban population will be most pronounced in sub-Saharan Africa. Social vulnerabilities will increase the likelihood of strife, and thus reinforce the ‘state fragility-conflict’ cycle. Intra-African and trans-regional forced migration due to economic factors, conflicts and environmental degradation will tend to grow for this reason.

Wars fuelled by nationalism and extremist identity politics, and the associated dangers of mass murder and genocide, will be the core security challenge of the coming decades. Criminal networks and populist nationalist movements will tend to make states more vulnerable. Terrorism will remain a concern, but low-intensity conflicts such as urban violence will also require increased attention from governments. Human security – protecting citizens in particular from mass violence – is likely to become the major driver of international security policies. But it is likely that states will concentrate their security and even defence policies increasingly on domestic security. The tendency to ‘securitise’ social and human issues may divide societies and lead to crisis and violence.

Part III – A polycentric world but a growing governance gap

A power shift to Asia but greater uncertainty

The world of 2030 will be diffusely multipolar and polycentric. There will be a plurality of actors, and no single world power will play a hegemonic role. This will generate greater freedom of manoeuvre for all international actors and give middle powers a more prominent role on the world stage. Polycentrism will be accompanied by an economic power shift toward Asia, where over half of the world's population will be concentrated by 2030.

China is projected to be the largest economic power with a 19 percent share of world gross domestic product (GDP), and India will continue to rise. Both countries will face major structural challenges, however. Brazil may become a successful example of sustainable development during the next two decades.

There will be a shift in economic power to China and India from the US, Europe and Japan but it is difficult to predict the long-term impact of the 2008 financial crisis on the world economy. It is uncertain how successful Russia will be in its efforts to modernise. However, economic power does not correlate automatically with political influence: other dimensions matter, such as soft power and, to a declining extent, military power. Thus, the influence of all powers will also depend crucially on their ability to act as models for economic, political and societal development, in particular in their neighbourhoods.

The United States is likely to remain the world's major military power, but Chinese military capabilities will very probably increase. Due to the many uncertainties about how the major powers will evolve, it is impossible to predict the level of global influence that each one may have. However, present trends seem to suggest that there will be no single hegemonic world power; that the US and China will be the most influential actors; that India will continue to rise; and that Russia and Japan will lose the great power status they enjoyed in the twentieth century.

A constellation of rising middle powers, including Indonesia, Turkey, and South Africa, will become ever more prominent. Traditional middle powers such as Canada and Australia will sustain their level of influence in global affairs, as may Mexico if it manages to overcome some of its present governance difficulties. Europe's leading states may also be tempted to carve a niche for themselves as autonomous international players. If Pakistan, Nigeria and Egypt consolidate their democracies, they could also become important middle range powers, with a capacity to exert a very positive regional influence.

Regionalism will be a power multiplier that is likely to favour international actors such as Brazil, Indonesia and South Africa, but not necessarily India or China. The international system that is likely to emerge as a result of all these shifts will probably mix balance-of-power politics and multilateralism, with states making issue-by-issue shifts and alliances. This will generate a higher level of unpredictability in international relations, and make it harder to attain a broad consensus even on matters requiring urgent global action.

Diffusion of power but dangers of fragmentation

Non-state actors, in particular national and transnational civil society networks and private corporations, will play a critical role in the coming decades. Their power and influence will be greater than that of many states, and may lead to new forms of governance and civic action. The devolution of power to federated states and regional and local authorities will continue and even accelerate: this process will be particularly rapid in the case of cities and extended metropolitan areas. By 2030, the fifty greatest megacities in the world will concentrate more resources than most small and middle-income states, and they will demand more autonomy and exert greater power, even taking on a more prominent international role.

Preserving humane living conditions in the world's megacities will be the major challenge facing some states, since rapid urbanisation will aggravate social exclusion and put intense pressure on public services. But affluent and dynamic cities worldwide will be the powerhouses of new areas of prosperity; by contrast, other regions, even in developed countries, will become depopulated due to decreasing work opportunities. Cities will also absorb most national security resources. At the same time, the growing trend towards the privatisation of central state functions will diminish the capacity of national governments to regulate public life or redistribute national resources. In extreme cases, this may entail the breakdown of state structures, and state fragility in some areas may further increase the disruptive powers of criminal or illegal networks exercising economic and even territorial control, particularly in Central America and Sub-Saharan Africa but possibly elsewhere.

Global initiatives but a governance gap

Greater awareness of the global nature of the world's citizens' topmost concerns will lead to a greater demand for shared solutions. But the call for global solutions is unlikely to be matched by supply, generating a governance gap. New constellations or 'hubs' of states inspired by the G20 model may emerge to address these challenges, but their ca-

capacity to find shared solutions will be partial at best. However, often global governance structures will be unable to deliver many of the international public goods that citizens will demand. This gap will be particularly evident when addressing economic and financial crises, climate change and resource scarcity.

The governance gap will likely weaken the legitimacy of national governments and international organisations alike. No single power will be able to play a leading role in the search for shared solutions to global problems. The key to success will be strengthened links between national, regional and global governance, and between state and non-state actors to build a consensus among the different players. Multilateral institutions may find it very difficult to adapt to a new global power landscape. The system is likely to have the capacity to contain major wars but it will be unable to meet other global challenges during the next two decades, and there will be increasing pressure to reform multilateral institutions to reflect shifting power relations, including a drive towards greater inclusiveness.

The international agenda will very likely cease to be essentially Western-driven and will shift to accommodate and address the priorities of a much broader and more heterogeneous range of states, and the concerns of citizens in newly-developed nations. Human development challenges are likely to gain increasing weight *vis-à-vis* traditional international security concerns. While the shift away from the Atlantic will be contested and may produce serious tensions, the overarching trend may well be towards convergence. It is likely that this shift in the global agenda will make consensus on international military interventions more dependent on a UN mandate than in the past, even if fewer states may be willing to provide the necessary means to make action possible. Other tests of the influence of the multilateral framework will emerge, particularly where climate change, energy, internet, intellectual property rights, financial regulation, and trade and social standards are concerned.

However, in a world characterised by the diffusion of power, meeting the challenges of human development will depend increasingly on non-state actors, be they private companies, non-governmental organisations (NGOs), or philanthropic institutions. But not all contributions by private actors will be positive: extremist non-state actors are likely to present a threat to the well-being of human communities.

Part IV – Greater uncertainties but broader opportunities

The global trends identified in this report do not allow us to define with certainty how the world will look in 2030, as much will depend on unknown variables. The various trends identified are likely to be disrupted by unforeseen natural and man-made events,

but will also be shaped by policy options that are in most cases unpredictable. One way in which policy makers can act is by formulating options to deal with current global trends that will have a lasting impact on the future of European citizens and citizens worldwide. Their future will be shaped not only by trends that are already visible today, but also by changes whose impact will depend on how societies respond to current challenges. The opportunities opened up by the trends identified in this report are enormous but so are the uncertainties and challenges to the well-being of citizens.

An age of convergence or conflicting nationalisms?

The fact that hundreds of millions of people are being lifted out of poverty to join the ranks of the middle classes, becoming more empowered and converging around a sense of a common humanity, constitutes a strong foundation for the development of economically fairer and politically more democratic societies. This creates an opportunity for national and global governance initiatives that are likely to find strong support among citizens, in particular among the younger generations, which are increasingly articulating their aspiration to a future with more justice, dignity and political participation and demonstrating their ability to take full advantage of the universalisation of the information society.

But an expectations gap is emerging because of the inability of governments to meet the aspirations of citizens for a better life. This gap may become a source of revolt and despair. This era of convergence and greater relative peace may be followed by one of exacerbated nationalism if the expectations gap is not narrowed by national and global initiatives to deal with the pressing issues of fundamental rights and participation in the political process, poverty and inequality, climate change and scarcity, particularly water scarcity, and to institute mechanisms to ensure greater transparency.

An age of scarcity or human development?

Economic growth is very likely to remain a major objective of emerging economies in their efforts to combat poverty and social injustice. But it is uncertain which kinds of development policies will be adopted, and whether they will be sustainable. There is currently a broad consensus about how climate change will evolve and what some of its consequences will be, in particular with regard to water and food scarcity, but it is not certain what national and global responses will emerge to change the pace of global warming. There is today a quasi-global consensus that it is necessary to take decisive action regarding climate change in this decade if we are to prevent humanitarian disasters of unforeseen dimensions in the latter part of this century. How governments will react to this challenge is difficult to predict.

Awareness of the need to reduce dependence on fossil fuel energy sources and of the importance of investing in green technologies is well-established. However the pace of technological transformation is also difficult to predict and some new technologies merit more sustained in-depth study and committed investment strategies, given their potential impact on human development. This is the case with new alternative energy technologies and biotechnology.

An age of multilateralism or fragmentation?

The fact that interstate wars are becoming increasingly unlikely in this age of convergence presents a major opportunity for deeper and more consistent cooperation among the major powers to build a fairer, more secure and more prosperous world – all of which are key goals of European security policy.

However if the multilateral moment is lost, a more polarised and fragmented system is likely to emerge; and the resolution of various issues will be blocked by the great heterogeneity of the actors that will exert influence in a polycentric world. It is hard to predict how the international system will evolve, primarily because of uncertainty about the evolution of the global economy and the power shifts that may follow. How China and India deal with the daunting political challenges with which they are confronted is an open question, as is how and when the US and the EU will recover from the severe economic and financial crisis in which they are currently engulfed.

Thus, major uncertainties prevail about the future of global governance. Will the ‘American multilateral moment’ falter under strong isolationist pressures emerging in response to the decline of its middle classes and the country’s difficulties in achieving economic recovery? What will be the multilateral agenda that will be shaped by the ‘rise of the rest’? What kind of global responsibilities will China, India and Brazil and other rising powers take on? Will the different actors of a polycentric world be able to reform multilateral institutions to deal inclusively with global challenges, particularly to promote a more stable and a fairer economic and financial system?

The future of the EU is also uncertain. What will the Union do to address pressing structural problems such as shrinking demographics, and to facilitate economic governance? To what extent will it manage to achieve policy-making coherence and consensus? The choices made will affect the future well-being of European citizens, and the capacity of the EU to forge an effective multilateral system.

A shift in trade and economic flows from the Atlantic to the Pacific may contribute to the relative marginalisation of the EU, but this scenario is not inevitable; it depends on how the EU copes with the present economic crisis and uses its strengths to operate effectively in a polycentric world. If it rises to the challenge in a credible manner, the current crisis could be reversed by a new ‘European renaissance.’

Monitoring the transition

The world, and Europe with it, is experiencing a period of transition, in particular of power, demographics, climate, urbanisation and technology. Transitions such as these involve a higher than usual level of uncertainty. Thus, it is crucial for governments and civil societies to invest in the study and monitoring of major trends. This report is an example of the kind of forward policy thinking that has become increasingly necessary in an uncertain world. The tracking of global trends is likely to increase worldwide; and it will be a fundamental aspect of Europe’s ability to prepare and respond to coming challenges.





Part I

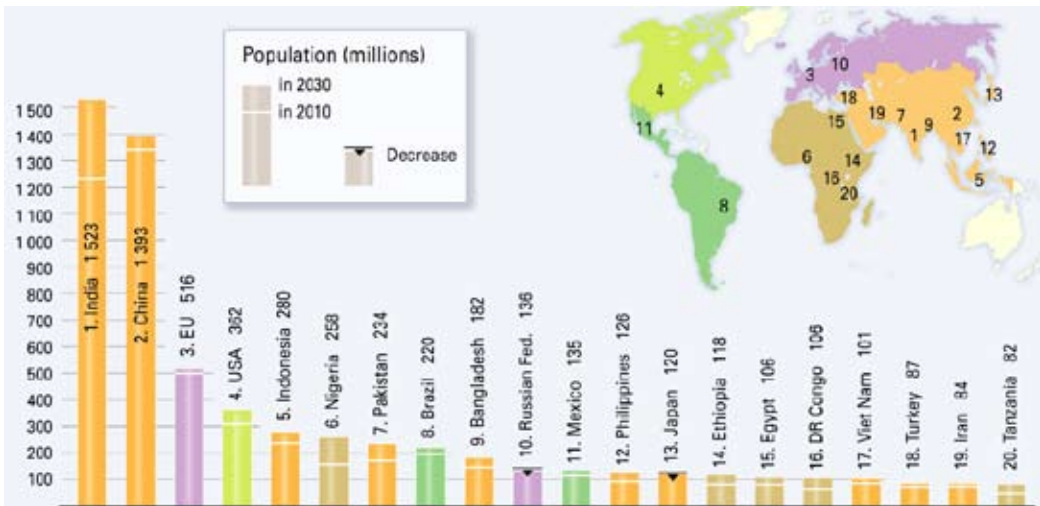
**The empowerment of
individuals: a global
human community
but a growing
expectations gap**



1. The empowerment of individuals: key drivers

From 6.9 billion today, the UN estimates that the world's population could reach 8.3 billion by 2030 (see Figure 1).¹ In sub-Saharan Africa, the population is projected to increase by 500 million people by 2030. Southern Asia's population is estimated to rise from 1.7 billion today to 2.1 billion by 2030. China's population is expected to stabilise, and then decline starting around 2025 after a peak of just below 1.4 billion. The aggregate EU-27 population will rise from 500 to 516 million in 2030; by contrast, Japan's population will decrease from 126 million in 2010 to 120 million by 2030.

Figure 1: Population of 20 major countries in 2010 and 2030



Source: UN Department of Economic and Social Affairs (2011).

1. Medium variant projections. UN Department of Economic and Social Affairs, *World Population Prospects: The 2010 Revision*. Population Division, Population Estimates and Projections Section, 2011. Available at: <http://esa.un.org/unpd/wpp/index.htm>.

Millions of individuals are being empowered by the social and technological progress of the last decades. The main drivers of this trend are the global emergence of the middle class with particular force in Asia, near-universal access to education, the empowering effects of ICT, and the betterment of the status of women around the world. Increasing numbers of people will live in the ‘information age’ as more portable and affordable technologies make information nearly universally accessible, and as the number of poor and marginalised groups gradually decreases.

The same drivers that spur the realisation that citizens of all countries belong to the same global community will also contribute to the ongoing empowerment of women. Today, women already have better access to education, information (thanks to the internet) as well as economic and political opportunities. This broadening of gender opportunities is likely to intensify, contributing to more equality, improving the prospects for economic development and social advancement, and promoting the growth of the intellectual and cultural capacities of different societies.

The global rise of the middle class

The spectacular growth of the middle class² in emerging countries is likely to have a major impact on global social and political developments (see Figure 2). The middle class will increase in influence as its ranks swell to 3.2 billion by 2020 and to 4.9 billion by 2030 (out of a total population of 8.3 billion).³

Over the coming 20 years, the world will likely evolve from being predominantly poor to mostly middle class, though the change will be geographically uneven. The year 2022 will mark the first year when more people are middle class rather than poor. It is estimated that the size of the global middle class will increase from 1.8 billion people in 2009 to 3.2 billion by 2020, and to 4.9 billion by 2030 with 85 percent of this growth taking place in Asia.⁴ The African Development Bank (ADB)⁵ estimates that the size of the African

2. There is no standard definition of the middle class. Belonging to the middle class is usually associated with meeting ‘basic needs and affording a few extras’ (Wheary). Relative approaches define the middle class as a middle segment within the income distribution scale of a given country. Absolute approaches, however, are better suited for international comparisons. This report uses Kharas’ and Gertz’s definition of the middle class as people who spend between USD10 and USD100 a day in PPP terms. Another definition is proposed by Wilson and Dragusanu, as people with annual incomes between USD 6,000 and USD 30,000 at PPP in 2008. See J. Wheary, *The Global Middle Class is Here: Now What?*, World Policy Institute, 2009; H. Kharas and G. Gertz, *The New Global Middle Class: A Cross-Over from West to East*. Washington D.C.: Wolfensohn Center for Development, Brookings 2010, at www.brookings.edu/~media/Files/rc/papers/2010/03_china_middle_class_kharas/03_china_middle_class_kharas.pdf; D. Wilson and R. Dragusanu, ‘The Expanding Middle: The Exploding World Middle Class and Falling Global Inequality,’ Goldman Sachs Global Economics Paper no.170, 7 July 2008: 5.

3. H. Kharas and G. Gertz, *ibid*, p. 5.

4. H. Kharas, ‘The Emerging Middle Class in Developing Countries’, *OECD Development Centre Working Paper no. 285*, January, 2010.

5. African Development Bank, ‘The Middle of the Pyramid: Dynamics of the Middle Class in Africa’, *Market Brief*, 20 April, 2011.

middle class will increase from 111 million people in 1980 to 313 million people in 2010 (from 26.2 to 34.3 percent of the population), with the greatest concentration occurring in northern Africa.

The biggest share of the global middle class will be in India and China. China's 157 million strong middle class is already the second largest in the world after the US, but it represents only 12 percent of the total Chinese population.⁶ India's middle class may outnumber China's by 2020 even if India remains poorer. India is likely to experience a dramatic expansion of its middle class from 5-10 percent of its current population to 90 percent in 30 years. Between 2015 and 2025, half of its population will cross the USD 10 per day threshold.⁷

Absolute numbers do not adequately convey the economic weight of the rising middle classes in emerging and developing countries since the purchasing power of the middle class in advanced countries is disproportionately higher. However, Europe's and North America's share of global middle class consumption is expected to decrease from 64 percent in 2009 to 30 percent in 2030; by contrast, the share in consumption of the Asian Pacific middle class is estimated to increase from 23 to 59 percent over the same period. In terms of consumption expenditure, India and China will have by far the biggest middle classes in the world (23 and 18 percent of global middle class consumption in 2030, respectively). By 2030, the US middle class will be ranked third in terms of consumption power; it will be followed by Indonesia which does not even rank among the top ten today.

When measured as a share in the population, 74 percent of China will be middle class in 2030 along with 88 percent in India and 69 percent in Brazil. In the EU and the US, close to 100 percent of the population will count as either middle class or rich according to the absolute definition of middle class used in this report (income between 10 and 100 USD/day). While this definition is useful to illustrate the massive reduction of abject poverty in emerging and developing countries, it is less suitable to determine the relative size of the middle class in advanced economies. The emergence of a global middle class is likely to narrow the material and cultural divides that slow the emergence of a global set of values. The mass of global polling data collected in the World Values Survey (WVS) provides empirical evidence of how economic development leads to value changes conducive to democracy.⁸ Thus, the emergence of a global middle class will not only narrow material differences but also promote an environment that is more likely to favour democracy and fundamental rights.

6. H. Kharas, op. cit. in note 4, p. 30.

7. Ibid., pp. 35 and 38.

8. R. Inglehart and C. Welzel, 'How Development leads to Democracy: What we Know About Modernisation', *Foreign Affairs*, March-April 2009.

Figure 2: Middle class growth to 2030



Source: *Khanas & Gertz (2010: 5)*.

Education: The cornerstone of knowledge societies

In 1990, about 73 percent of the world population was literate. In 2010, global literacy rates reached 84 percent and the literacy rate may pass the 90 percent mark in 2030.⁹ There is still inequality between men and women with respect to literacy. According to data of the United Nations Educational, Scientific and Cultural Organisation (UNESCO), in the period from 1985 to 1994 the literacy rate for men averaged 82.1 percent and for women it averaged 69.2 percent, a difference that barely declined in the period between 2005 and 2009 (by that date, the rate was 88 percent for men and 79.2 percent for women). The increase in women's literacy rates and, more generally, their empowerment is very uneven across regions: in Africa, for instance, the literacy rate of men averaged 63.1 percent in the period from 1985 to 1994 compared to 41.6 percent of women; and from 2005 to 2009, the literacy rate averaged 72.2 percent for men and to 54.6 percent for women.¹⁰

In 1995, 0.7 percent of the world population had internet access, which was unevenly distributed across continents and regions, and in 2000 6.4 percent were connected. By 2010, the figure had risen to 29.7 percent,¹¹ and regional distribution had become less uneven. It is expected that more than half of the world's population will be connected by 2030. In practical terms, connectivity ultimately will be limited only by the availability of power supplies.

This will strengthen the interconnection between people, fostering sharing of information and values, and deepening awareness of common challenges. Cyberspace is largely and increasingly an area of freedom of expression. A recent report analysing values shared by internet users in 14 countries (Australia, New Zealand, Brazil, Germany, France, Mexico, Italy, Spain, China, India, South Africa, Canada, the US, the UK)¹² suggests that freedom of expression and the right to privacy, trust and security are already shared concerns. Global advocacy networks supporting human rights, such as Human Rights Watch (HRW) or Amnesty International (AI), are benefiting enormously from the 'amplifier' effects of new communication technologies. Micro-blogging tools such as *Twitter* and the Chinese *Weibo* are becoming free speech platforms, a trend that is likely to intensify.

9. See: UNESCO Institute for Statistics at <http://stats.uis.unesco.org/unesco/TableViewer/tableView.aspx?ReportId=210>, which provides data up to 2009; the projection for 2030 is based on predictions in the Roland Berger *Trend Compendium 2030*, which predicts that primary school enrolment will be above 90% by that year. R. Berger, *The Trend Compendium 2030, Global Knowledge Society*, at http://www.rolandberger.com/expertise/trend_compendium_2030/global_knowledge_society.html.

10. UNESCO Institute for Statistics, available at <http://www.uis.unesco.org/Pages/default.aspx>.

11. International Telecommunication Unit, World Telecommunication/ ICT Indicators database, 15th edition, June 2011.

12. S. Dutta, W. H. Dutton and G. Law, 'The New Internet World: A Global Perspective on Freedom of Expression, Privacy, Trust and Security Online', *The Global Information Technology Report 2010-2011*, World Economic Forum in collaboration with INSEAD, comScore, and the Oxford Internet Institute, April 2011, at <http://ssrn.com/abstract=1810005>.

Global communication networks based in several countries inspired by the success of *Al Jazeera* will challenge the Western-dominated global media and provide a variety of perspectives on local and world events. Recourse to automatic online translation tools will help to overcome language barriers.

The information age: empowerment but threats to privacy

Communication is vital for human groups, be it families, businesses, communities, states, or global groups. In the past, political, economic, military, and cultural development was based on a material economy and on analogue communications technology. Location and borders mattered and could be policed. In the new digital world, distances and borders are becoming less relevant. The digital economy is a small but growing¹³ part of the global economy. Material that can be digitised – knowledge and meaning – constitutes a rapidly growing share of the added value of products and services. The democratisation of internet access and the exponential development of web-based communication tools (blogs, social networks or micro-blogging) are radically transforming the way information is produced, reproduced and disseminated worldwide. The social dynamics of the internet are likely to intensify ever further with the new generation of users who have been using the internet since primary school.

The information and communications technology (ICT) revolution will be a key driver of individual empowerment, facilitating the way people share ideas and affirm their rights. Historically, control of the mass media and of access to computer technology such as mainframe computers, has served to enhance the power of those at the top of the pyramid. However, as new communications technologies become increasingly wireless and mobile, citizens will have greater access to new technologies worldwide. This will continue to disrupt the traditional model of influence of the mass media. The democratisation of information-sharing via the internet, and of computing power via the spread of mobile computing, ensures that individuals will become relatively more empowered.

The ICT revolution is giving people access to vast stores of knowledge, and enabling new and transformative people-to-people connections. It is likely that this revolution will become practically universal over the next two decades, and that individuals and powerful private groups will consequently gain increased autonomy *vis-à-vis* states in most regions of the world. Knowledge is no longer concentrated in the hands of a few; it can be created and shared by ordinary citizens everywhere, challenging the very legitimacy of traditional sites of knowledge and information production such as universities and the media.

13. 'US smart phones and tablets sales in 2011 break revenue records. Forecasts predict a 5.6% rise to a record high of \$190bn' (www.guardian.co.uk/technology/2011/jul/18/us-tablets-smartphones-record).

Empowered by these new technologies, individuals are able to communicate instantaneously with virtually anyone anywhere, and determine the nature and content of the information delivered. In a world where ‘knowledge is power,’ this has important consequences. People can turn these online tools into instruments for political and civic protest, bringing to light what is often concealed and repressed by public or governmental institutions and official media channels. New technological tools are enabling people to fact-check, share information, disseminate news, and produce views of events that would normally be hidden or banned from the public space. Although the information revolution is most likely to empower individuals, there will also be fierce battles over issues of freedom and control.

A universal information revolution: the new world of the internet

The global growth of internet use has been and will continue to be exponential (see Figure 3). In 2011, 28 percent of the world population had access to the internet. The developed world, including Europe, the United States, South Korea, and Japan, account for over 60 percent of global users. China is catching up rapidly while India lags further behind with just 6.9 percent of global users. Looking towards 2030, the following major trends may be identified:

A shifting centre of gravity

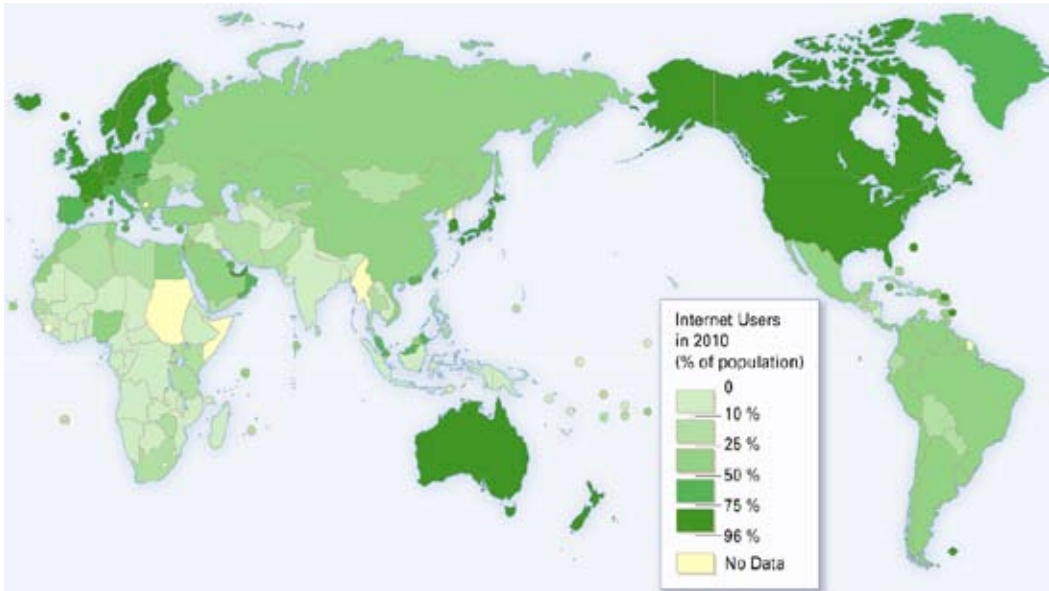
Emerging states, particularly in Asia, are likely to become very influential in the digital world as their huge populations become connected. Given their early adoption of the internet, hitherto North American and Western European users have dominated the cybersphere. But in terms of absolute numbers, the centre of gravity has shifted to Asia, which already hosted 42 percent of internet users in 2010.¹⁴ In 2002, North America accounted for 37 percent of the world’s internet users, but by 2010, its share had declined to 14 percent.

This shift will continue and is most dramatically illustrated by the fact that in 2010 there were more internet users in China than there were people in the US, despite the far lower level of internet penetration in China. Given user numbers, the emerging nations may present a challenge in terms of internet services, as exemplified by Sina and RenRen, the Chinese equivalents to Google and Facebook, respectively. The emergence of new internet services could challenge the universal integrated use of the internet and favour the proliferation of fragmented and even closed communities, but users are likely

14. See World Internet Stats at: www.internetstatsinternetworldstats.com/stats.htm.

to find ways to overcome such limitations and to connect to global networks. However, it is unlikely that the superior innovation capacities and coverage of US companies will be challenged in the near future.¹⁵

Figure 3: Internet users 2010



Source: ITU (2011).

Emerging nations as leading internet use innovators

Internet users in emerging states are more innovative in their patterns of use. They are more likely to produce rather than merely consume content; they are more likely to communicate actively online through social networking sites; and they are more likely to be Web 2.0 enthusiasts than users in the developed nations, who are more accustomed to e-mail and Web 1.0 and are less trusting of social media.

15. The August 2011 survey in *Foreign Policy* describes the US as by far the most innovative in terms of internet technology, although the use of technology differs from country to country. It may be that the likelihood of using social media online is related to the cultural and political limits placed on freedom of expression offline. Users in countries that become increasingly free will have different incentives to use online systems. See: *Foreign Policy*, The FP Survey: The Internet, *Foreign Policy*, September-October 2010, at www.foreignpolicy.com/articles/2011/08/15/the_fp_survey_the_internet. A McKinsey report suggests that the economic benefits of ICT are going mostly to leading Western and East Asian technological leaders. McKinsey Global Institute, *Internet Matters: The Net's Sweeping Impact on Growth, Jobs and Prosperity*, May 2011, at www.mckinsey.com/mgi/publications/internet_matters/pdfs/MGI_internet_matters_full_report.pdf.

Narrowing the digital divide

The digital divide will not disappear completely over the next twenty years but the digital world will become increasingly flat. The key benefits of a networked society – near free communication, and access to essential business and educational content – will become cheap enough for even for the most marginalised groups in the least developed countries, opening up opportunities for political participation and giving them a cultural voice in the global arena. Computer prices have already fallen by 90 percent over the last decade, and will continue to do so in coming decades.¹⁶ However, if knowledge and not just information is taken into account, deeper hierarchies will emerge between the companies, governments, and regions that produce and control strategic knowledge and those that do not.

Technological leapfrogging

Landline copper wire networks are being bypassed because wireless data and voice networks are cheaper and more effective.¹⁷ *WiMax* in India and the explosion of mobile telephony in Africa exemplify this trend. Mobile networks are likely to proliferate in the very near future, making most low to medium bandwidth services available for mass use. This will happen even in countries with poor governance and limited infrastructures, because mobile networks only require radio transmitters. Developing countries with good governance structures will install high-speed optical networks, and 4G technology is likely to become widely available. By contrast, countries such as the US have a technological legacy-base which can present regulatory and logistical obstacles to developing wireless networks.

ICT will increasingly include services such as cloud computing. Clouds will be global, further equalising the availability of services around the world. Cloud computing will allow a business or an individual in an undeveloped country to have the same digital infrastructure as their competitors in the developed world in ways that will not be possible in areas of physical or governance infrastructure, such as roads, building, healthcare and other social services.

16. Today, 30.2% of the world population has access to the Internet, with an average growth rate of 480.4 % over the period 2000-2011. Following exponential growth rate, by 2030 99% of the global population will have access to the Internet, especially if Internet access is regarded as a public good and is provided by the state for free. Following Moore's law, by 2030 computer devices will be affordable for almost 100% of the global population. Smart phones and tablets will be sold over the counter at a kiosk for a price we cannot imagine today, following the same path of pocket calculators from the 1970s and 1980s (See wallstreetpit.com/4300-computer-prices-have-fallen-by-90-over-the-last-ten-years-is-that-evidence-of-monopoly-power).

17. C.-Y. Huang, 'Rethinking Leapfrogging in the End-User Telecom Market', *Technological Forecasting and Social Change*, vol. 78, no. 4, May 2011, pp. 703-712.

Individual rights, privacy and data protection

There is a clear trend for corporations and governments of all political stripes to use digitalisation and computerisation to exert greater control over citizens and consumers. Thus, from a citizen's point of view, the cyber world can also be a threat. Conversely, the increasing use of ICT by citizens to share information and organise non-state activities will be seen as a potential danger by some governments, particularly authoritarian regimes. Some states will make efforts to limit citizen access to politically threatening ideas – although such efforts are likely to meet with only very partial success. In addition to outright censorship, states may use the internet to hone surveillance techniques, disseminate cutting-edge propaganda, and pacify populations with digital entertainment, directing rather than constraining online development.

Overall, increasing digitalisation and computerisation of different aspects of daily life will contribute to individual empowerment and democratisation. Oppressive regimes may be weakened as the result of contestation using new technologies. In some countries, governments regularly infiltrate online groups used by the opposition. To control citizens' online world they block or filter content, criminalise legitimate expression, impose intermediate liability or completely disconnect people from the internet. They may also use off-line surveillance and control. But digital communication and information is difficult to control because of the decentralised nature of the internet. Even in the most restrictive states internet users can find ways to circumvent controls with technological and organisational innovation.

Concern with security threats is not limited to illiberal regimes. As new technologies become more ubiquitous, their use will become normalised in a broad range of social, political and economic activities, creating new points of vulnerability. Strategically, ICT will be essential for economic development and military advancement. Networked militaries and businesses will rely increasingly on seamless and secure communications systems, creating opportunities for those who seek to disrupt these systems. As the shift to wireless technology gathers pace, such systems will become more reliant on a limited number of potentially vulnerable nodes such as satellites and transmission towers.

Cyber-attacks are likely to increase. Militaries may focus on cyber-warfare when they lack conventional arms superiority. Cyber-crime by organised groups and anarchic disruptors is likely to threaten businesses, individuals and governments relying on digital systems. World financial systems, with their massive digitised capital flows, could be at risk from cyber-crime. These kinds of threats may encourage the balkanisation of the internet, as political and economic actors seal off portions of cyberspace to protect their realms, cre-

ating small intranets that change the nature of the global internet.¹⁸ China is already attempting to do this as it tries to seal off its citizens from contaminating external influences. But overall networks are becoming global and the users of social networks are continually finding new ways to circumvent the filters that authoritarian (and, indeed, less authoritarian) regimes seek to impose.

New technologies will raise questions of privacy and social control. As personal and economic worlds become digitised, people become more vulnerable to attack and manipulation by others in new ways. The spread of cloud computing networks will increase this vulnerability as users become increasingly reliant on the operation of systems outside their physical control. Issues of personal privacy protection will become more important, and governments, societies and businesses must find ways to maintain the balance between openness and privacy.

There are also questions about where and how to tax digital content, where and how ‘digital nomads’ – people who work at a distance digitally – should pay their social security contributions, what ‘national’ law applies for content on the internet, how to manage intellectual property rights. It is difficult to determine what local law applies to a service provided by a cloud with unclear geographic properties, and to apply classical deterrence and counterattack measures in cyberspace where attacks happen by proxy and are difficult to trace. Working out how to deal with these issues will become an ever more central topic in international negotiations.

Thus far, the internet has been an open network with few financial restrictions. A potentially worrisome possibility is that the internet may develop into a number of closed networks dominated by commercial players instead of operating as an open platform, as an ‘international public good.’¹⁹ Disturbingly, large companies like Google are increasingly seeking to understand and utilise the specific interests of individuals, and providing access primarily to the material that matches those interests. This process of personalisation can limit the possibilities for individual exploration and create barriers between people.

18. ‘While only a small percentage of Chinese use these tools to sidestep government filters, the ease with which they can do it illustrates the difficulty any government faces in enforcing the type of strict censorship that was possible only a few years ago.’ B. Stone and D. Barboza, ‘Scaling the Digital Wall in China’, *The New York Times*, 15 January 2010, at www.nytimes.com/2010/01/16/technology/internet/16evade.html?pagewanted=all.

19. J. Zittrain, *The Future of the Internet, and How to Stop It* (New Haven: Yale University Press, 2008). Available at: future-of-the-internet.org/download.



2. Converging values and demands, but risks of extremism

The realisation that there is ultimately one global community will come about primarily because of the collective realisation that people share similar aspirations and difficulties. This trend is likely to be reinforced by increased global mobility (facilitated by lower transportation costs) and the instantaneity with which information reaches people separated by large distances. These processes will increase the sense of a *unified time and space*. This may further contribute to the idea that peace, freedom, dignity and justice should be available to all people

Over the next 20 years it is likely that a set of ever broader universal values will be shared by a growing number of citizens around the world. Distinctive cultural identities will also thrive, and citizens will perceive democratic aspirations as being compatible with the right to affirm cultural identities. This trend was quite clear in China and Egypt, but is also the case of India. The quite widespread thesis during the 1990s that Asian values were distinct from universal ones seems to be no longer valid, and human rights and democracy are presented more and more in public debates as part of universal values – instead of ‘Western’ ones.

The universal spread of human rights and democracy

A study conducted by the Pew Research Centre in 2009 shows that the middle classes in thirteen countries (Chile, Ukraine, Russia, Venezuela, Poland, South Africa, Malaysia, Mexico, Brazil, Egypt, Argentina, India and Bulgaria) attach increasing importance to competitive elections and individual liberties and are less inclined to accept gender discrimination.²⁰

Current trends suggest that the values of democracy, human rights and freedom of expression will become more widespread (see Figure 4). Today, around four in every five people worldwide believe that democracy is the best available system of government. This view holds across differences in region, religion, gender and age.

20. Pew Research Centre, *The Global Middle Class: Views on Democracy, Religion, Values, and Life Satisfaction in Emerging Nations*, Pew Global Attitudes Project, 12 February 2009, at <http://www.pewglobal.org/2009/02/12/the-global-middle-class>; Asian Development Bank, ‘The Rise of Asia’s Middle Class’, Special Chapter in *Key Indicators for Asia and the Pacific 2010*, 2010, p. 48.

Opinion surveys consistently show that those opposed to the universal spread of fundamental rights are in a shrinking minority.²¹

Table 1: Support for democracy

Region		Religion	
North America	85 %	Christians	80 %
Central & South America	81 %	Muslims	74 %
Western Europe	86 %	Hindus	85 %
Central & Eastern Europe	66 %	Buddhists	82 %
Africa	84 %		
Asia	75 %		
Gender		Age Group	
Men	81 %	Aged < 30	77 %
Women	77 %	Aged 30 to 50	79 %
		Aged > 50	80 %

Source: Gilani (2007).

Global survey data taken around the world in recent years by the Pew Research Centre and the World Values Survey conclude that increasing prosperity acts as a catalyst for gradual value change, with the development of a greater attachment to democratic institutions and individual liberties and greater environmental concerns.²² Earlier versions of modernisation theory inaccurately proclaimed an expectation of economic development leading to Westernisation, democracy and socio-cultural change. Today, a more nuanced, and empirically supported, modernisation theory describes how economic progress (i.e. joining the middle class) opens up new avenues for freedom of action among individual citizens. Modernisation does not automatically bring democratisation, but only the social and cultural changes that are conducive to democracy, especially the syndrome of self-expression values, which accord high priority to free choice and motivate political action.

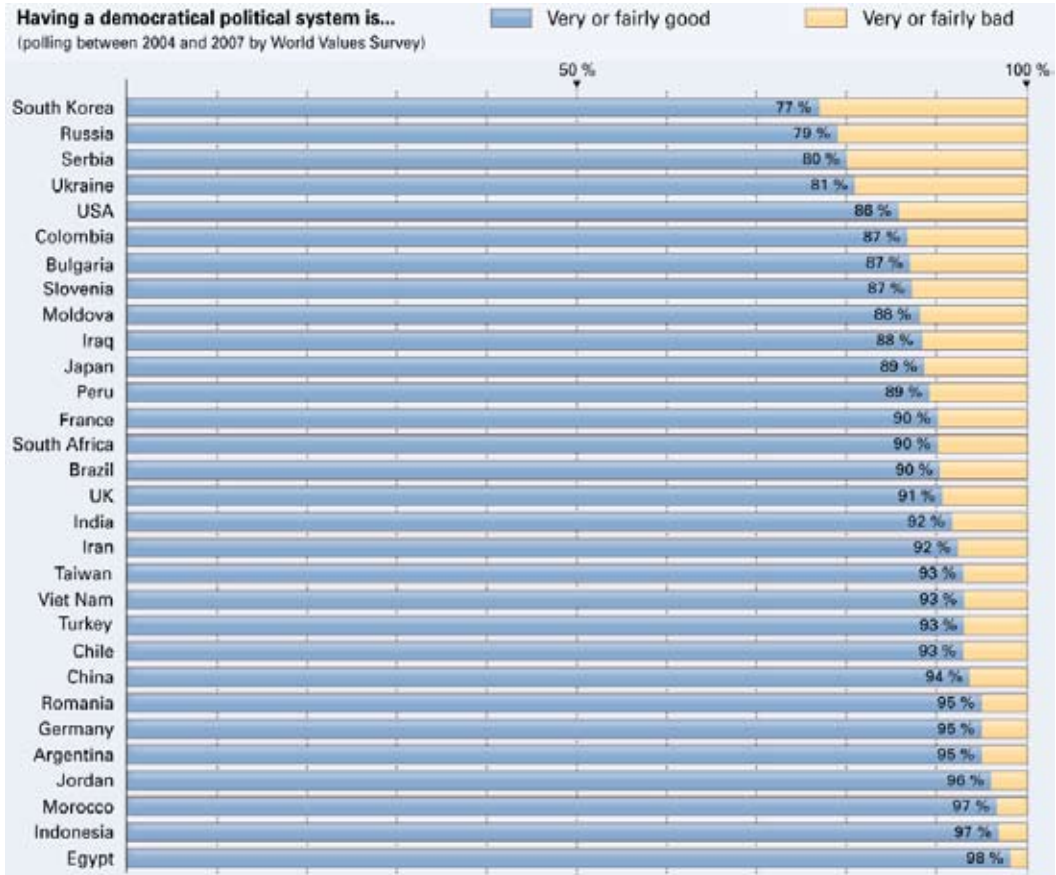
In propitious conditions, the middle class can become a potent force pushing for improved governance and public services, for greater public sector accountability and transparency.²³ The middle classes tend to be aware of their rights, are usually well disposed towards gender equality, and well organised. They are currently a source of leadership and social activism in southern NGOs, although their role differs in intensity.

21. I.S. Gilani, 'Global Trends on Human rights and Extremism: Which One is on the Rise?' *ESPAS Commissioned Paper* (Chairman-Gallup Pakistan), 2011.

22. Pew Research Centre, op. cit. in note 20; Inglehart and Welzel, op. cit. in note 8.

23. Asian Development Bank, op. cit. in note 20.

Figure 4: Democracy around the world



Source: WWSA (2009).

There is, however, no automaticity between economic progress and democratisation; further, there can be democracy, however imperfect, in societies that have not reached stipulated 'thresholds' of development. Democratisation is not only a matter of a rising GDP *per capita*, but involves profound social and cultural changes that affect embedded historical institutions, traditions and practises. It is unlikely that modernisation will make richer, more educated and more urbanised emerging middle classes converge towards Westernisation; rather there is likely to be a social and cultural transformation leading to an accentuation of self-expression values, which will make it increasingly costly to avoid democratisation.²⁴

24. Inglehart and Welzel, op. cit. in note 8.

Women's rights

Women are becoming empowered throughout the world, a trend that is likely to continue into the future. Women's rights have gained increasingly firm recognition as human rights. The issues that affect women's rights include health and sexual and reproductive rights; combating gender-based violence and all forms of political, social and cultural discrimination against women; and asserting women's economic, social and cultural rights.

There is growing awareness of gender rights as a key part of the strategy to combat poverty and inequality. Women now have better access to education, information, and economic and political opportunities, all of which contribute to greater gender equality. However, progress is very uneven from region to region and between different social groups, with girls, indigenous, immigrant or low-caste women remaining especially vulnerable.

One of the main obstacles to women's empowerment is the kind of religious extremism – such as that found in Afghanistan – which sees women as inferior beings and justifies their being deprived of basic rights such as access to health care or education. Thus, recognition of women's rights involves rejecting the kind of cultural relativism that seeks to justify unacceptable violations of human rights by defending harmful cultural traditions such as female genital mutilation or stoning. It is likely that such practices will be subjected to increasing social and political opprobrium worldwide. Arguments about cultural differences will be challenged increasingly by women who are empowered by the spread of the values of democracy and human rights.

Sharing the earth

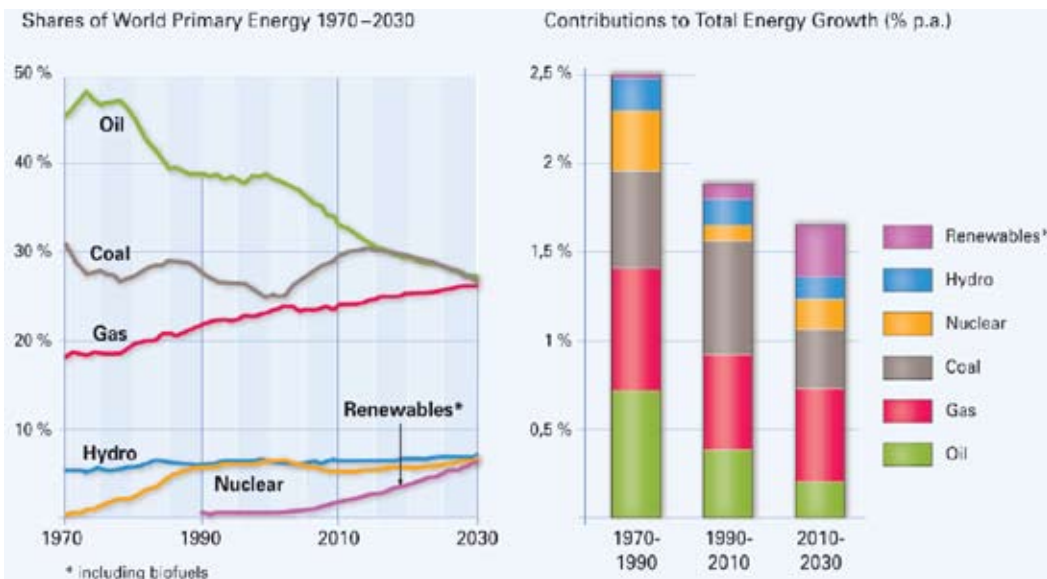
Growing awareness of planetary challenges such as climate change, natural and man-made disasters, resource depletion and epidemics, is leading people to realise the extent of their interdependence and shared fate. Environmental degradation is likely to promote people's sense of a shared humanity as it becomes increasingly clear that its dangers cannot be contained within national communities. The impact of climate change must be managed locally but its social effects extend far beyond national borders. This awareness is already generating a global or 'earth patriotism.'²⁵ Growing awareness of interdependence does not mean that people will automatically work toward shared solutions, but given the scale of the environmental and climate change challenge, is likely that by

25. Edgar Morin suggests that a 'transnational, ecological allegiance' (or global Earth 'patriotism') may emerge in decades to come because of globalisation and the perception that people share a planet and common fate. But Morin also underlines that this 'Planetary Era' of globalised ideas, civic engagement, scientific discovery and other potentially beneficial trends, will also have a dark face, marked by the spread of disease and war. As the author notes, finding a balance between these conflicting trends will be the greatest responsibility of future generations, since the preservation of life as we know it will depend on that balance. See E. Morin and A.B. Kern, *Terre Patrie* (Paris: Editions du Seuil, 1993).

2030 a critical mass of people will be persuaded that carbon-dependent development models must be phased out.

Emerging economies are unlikely to accept slow growth to halt climate change, but they may promote more climate-friendly, green technology-based growth policies.²⁶ Indeed, over the last two or three years, G-20 Emerging Markets (GEM) countries have worked harder to adopt clean energies, and have become key low-carbon innovators and global leaders in state stimuli for green measures. As shown in Figure 5 below, the share of renewable energy in total energy growth in 2030 is projected to triple from 1990 numbers. China is now one of the leading users of solar and wind energy, electric cars, and high-speed rail technologies. It has also overtaken the US to become the leading producer of solar photovoltaic (PV) cells. Calls for collective action to halt climate change, such as targets for emissions reductions, will continue to challenge existing national and international power structures.

Figure 5: Shares of world primary energy, 1970-2030



Source: BP (2011a: 10).

26. For some examples of low-carbon growth and technology in emerging countries, see C. Hepburn and J. Ward, 'Self-interested Low-carbon growth in G-20 Emerging Markets', *Global Journal of Emerging Market Economies*, vol. 3, no. 2, 2011, pp. 208-9.

According to one poll, many citizens of emerging countries already view global warming and climate change as key challenges (67 percent in China, 56 percent in Brazil, 54 percent in South Africa, and 53 percent in India). It is notable that the figures for Britain (33 percent) and the US (22 percent) were significantly lower.²⁷ Given the impact of environmental change on people's lives, human well-being and development indicators are likely to move beyond wealth indicators and include aquifer health, fishery survival, deforestation, river estuary health, and climate conditions among other measures. This is already the case with the *Better Life Index* of the Organisation of Economic Cooperation and Development (OECD).²⁸

Economic interdependence is likely to deepen as the future of one state and its citizens becomes increasingly dependent on the policies, growth and well-being of other states and citizens. This trend may be counter-acted by protectionism and more mercantilist behaviours, particularly if deep recession sets in. But the financial crisis of 2008 has also starkly illustrated the meaning of global interdependence; and this will become even more evident as China and India integrate more fully into the world economy. The immense impact that these economies will have on the global cost of capital and resources and competition for resources will affect all countries. However, the influence that India and China may wield will depend on their engagement with the international economic system; and given their reliance on exports and the extent of Chinese ownership of Western debt, the well-being of Chinese and Indian citizens is linked to that of their neighbours and trading partners around the world.

Access to affordable energy is a common global challenge. Each society faces unique energy challenges, but certain problems are increasingly global, particularly the interconnected issues of sustainability and security of supply given the depletion of fossil fuel resources, and ever-increasing global energy consumption. Most states will face a scarcity of fossil fuels, and allocation will depend both on international geopolitical competition and market forces. To date, security of supply has been addressed nationally, but it has the potential to deepen awareness of interdependence between consumer, transit and supplier countries.

27. This Ipsos MORI poll asked people in eight countries (Australia, Brazil, China, India, Saudi Arabia, South Africa, the US and the UK) to identify 'the two or three greatest challenges' that face the world, and their country. Ipsos MORI, *World Questions Global Survey*, November 2010, at <http://www.ipsos-mori.com/researchpublications/researcharchive/poll.aspx?oltemId=2689>.

28. See: www.oecdbetterlifeindex.org/.

A 'post-Huntingtonian' world

Democratisation is likely to diminish the popularity of exclusionary national identities and the idea of civilisation-based cleavages or cultural relativism. These phenomena will not disappear, however, and may gain ground in contexts of economic crisis.

Over the next 20 years, a more democratic Arab world may emerge, with rule of law and human rights values and social development undermining nationalism and patriarchal systems. The democratic uprisings that swept the Arab world in 2011 have shown that Islam and democracy are not incompatible. Young people from Indonesia to Morocco retain their Muslim identity and yet actively subscribe to democratic values. Indeed, young Muslims express the view that democracy and political participation facilitate the affirmation of national, cultural and religious identities and creativity.

It is unlikely that world cultures will become more homogeneous, or that cultural diversity (and 'identity'-based diversity) will disappear. Indeed, there will be a 'hyper-supply' of diverse cultural products on the internet,²⁹ which may contribute to the affirmation of community identities. But producers and consumers of these contents will share an interest in the openness and neutrality of the system.

Mobility within and across countries and continents will continue to increase. Today, three percent of the world's population consists of migrants (214 million people in 2010) and on current trends this number will be closer to 300 million by 2030. Migration patterns are also likely to change and become increasingly 'circular,' so that migrants will maintain ties with their countries of origin, while strengthening transnational movements.

Cultural pluralism will become a key trait of societies where migrants have accentuated cultural, ethnic and religious diversity. But cultural pluralism will also be challenged by extremism and xenophobia, which is likely to increase in societies with a shrinking middle class, where openness is perceived as a threat to well-being, or where governments use migrants as scapegoats for existing social problems.

29. P.-J. Benghozi, 'Le deuxième choc de l'économie de la culture', *Esprit*, July 2011, pp. 111-25. UN Department of Economic and Social Affairs, 'Trends in International Migrant Stock: The 2008 Revision'. United Nations, 2009, at <http://esa.un.org/migration/index.asp?panel=1>.

The expectations gap and the risk of extremism and nationalism

Today, many citizens worldwide already see issues such as environmental degradation, climate change, natural and man-made disasters, resource depletion, and epidemics as the major challenges facing humankind.³⁰ But the links between millions of people subscribing to the idea of a single human community will contribute to the power of this incipient ‘global public opinion.’ The convergence of concerns and increasingly vocal demands for improved quality of life will contrast sharply with the capacity of governments to deliver public goods. This will generate an expectations gap that may become a source of tension and even social revolt, particularly if the conditions for economic governance worsen. Shared values will not spread evenly, and they will be challenged by old and new forms of extremism, often linked to identity-based politics arising from an expectations gap and a concomitant sense of marginalisation.

Although it is a minority phenomenon, resurgent nationalism fosters social fragmentation and conflict. It remains the key threat to democracy, human rights and basic liberties. Increased access to information through traditional and new social media outlets will be a double-edged sword: it may promote shared values and peace but it may also be used to spread disinformation, propagate hatred and incite violence, or simply as an instrument of control and repression by authoritarian states.

Some predict that tensions over economic issues, energy and commodities, scarcity and competition for raw materials will increase populist economic nationalism and resource nationalism.³¹

The extent to which this happens depends on the long-term impact of the current financial crisis and the emergence of isolationist and xenophobic movements in Europe and the US in response to the negative social and economic consequences of that crisis. In China, nationalistic trends could develop in response to economic recession and emerge in response to the difficulties faced by the ruling Communist Party. However, economic nationalism is not an automatic response to economic difficulties; the current financial

30. Among the many polls indicating an increasing ‘shared global concern’ are: World Bank Report, *Public Attitudes Toward Climate Change: Findings from a Multi-Country Poll*, July 2010, at http://siteresources.worldbank.org/INTWDR2010/Resources/CC_Poll_Report_July_01_2010.pdf; Pew Research Center, *Rising Environmental Concern in 47-Nation Survey*, June 2007 at: <http://pewglobal.org/files/pdf/256.pdf>; GlobeScan Radar Wave 2, 2010, at <http://www.globescan.com/findings/?id=16>; J. Ray and A. Pugliese, *Worldwide Blame for Climate Change Falls on Humans*, Gallup, 22 April 2011 at <http://www.gallup.com/poll/147242/worldwide-blame-climate-change-falls-humans.aspx>; Ipsos MORI, *Key Environmental Concerns by Nation*, April 2011, at: <http://www.ipsos-mori.com/Assets/Docs/Polls/sri-environment-global-advisor-april-2011-presentation-slidepack.pdf>.

31. V. Cable, ‘The Rise of Economic Nationalism’, *New Statesman*, 16 October 2008; ‘The Return of Economic Nationalism’, *The Economist*, 5 February 2009; WTO, *International Trade Statistics 2010* (Geneva: WTO, 2011), pp. 37-38.

crisis shows that this sort of challenge can also generate a greater awareness of the degree to which national economies are interdependent.

Although citizens may be empowered by increased access to information, globalisation and interdependence also generates feelings of helplessness among citizens, when they sense they cannot influence world events; this can also lessen the legitimacy of national governments and weaken representative politics. In such instances, there may be a resurgence of identity politics and conflicts fuelled by nationalism. The expectations gap may deepen given the explosive mix of increased access to information and deep socio-economic inequities. This is a fertile breeding-ground for extremist ideas that may challenge the dominant trend towards the perception of a common humanity.

As their influence wanes, and as fears about the future increase among the middle classes, the United States and Europe will not be immune to extremist nationalism. Europe in particular is vulnerable because of the demographic transition it is undergoing, and the need to adapt to more multicultural societies. The end of economic dominance by the United States is seen as one of the major challenges to the well-being of its citizens, and might set the stage for a 'clash of the middle classes' in that country.³² This is likely to increase the popularity of isolationist populist trends. Furthermore, some see the growth of the Hispanic population in the US (nearly a quarter, or 22.5 percent of its population will be Spanish-speaking by 2030) as a threat,³³ and this is challenging the tradition of openness to migration.³⁴

32. Comments by Moisés Naim during the Workshop, 'The United States and its Foreign Policy in 2030', held in Washington D.C. at the Atlantic Council, 12 July 2011.

33. Americans see Hispanics as the racial or ethnic group most often subjected to discrimination: nearly one in four (23%) Americans said Hispanics are discriminated against 'a lot' today, a share higher than observed for any other group. See *Pew Social and Demographic Trends, 2010*, at <http://www.pewsocialtrends.org/2010/01/12/blacks-upbeat-about-black-progress-prospects/>. The 22.5 % refers to Hispanics who are not necessarily Spanish-only speakers or non-English speakers. Indeed, the majority of Hispanics who speak Spanish are also proficient in English. Census data shows that 32.2 million US residents aged five and older speak Spanish at home, but among those more than a half say they speak English 'very well.' L. Fraga et al, *Redefining America: Key Findings from the 2006 Latino National Survey*. PowerPoint presentation available at: depts.washington.edu/uwiser/documents/WWC_Rollout_FINAL_06.12.07a.ppt; Woodrow Wilson International Centre for Scholars, United States Studies: *Redefining America: Key Findings from the 2006 Latino National Survey*, at www.wilsoncenter.org/index.cfm?topic_id=1427&fuseaction=topics.event_summary&event_id=201793; US Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2005, at <http://www.bls.census.gov/cps/asec/2005/sdata.htm>.

34. Historically, Americans have had a relatively positive view on (regular) migration, but a 22 June 2011 Gallup poll and other surveys over the last decade suggest they do not believe that the migrant population should increase. J.M. Jones, 'Americans' Views on Immigration Holding Steady', *Gallup News*, available at: <http://www.gallup.com/poll/148154/americans-views-immigration-holding-steady.aspx>. A Pew Research Centre for the People & the Press poll of February 2011 (at <http://people-press.org/2011/01/20/economy-dominates-publics-agenda-dims-hopes-for-the-future/>) also shows that American public opinion continues to strongly oppose irregular immigration, which is considered a middle-tier public concern (<http://pewresearch.org/pubs/1904/poll-illegal-immigration-border-security-path-to-citizenship--birthright-citizenship-arizona-law>). The Pew Centre Annual Policy Priorities survey of January 2011 shows that about half (46%) of interviewees said irregular immigration was a top policy priority, far behind the economy (87%), jobs (84%) and various other issues.

Non-state actors and networks may spread ideas about shared human values, but information technologies will also facilitate the diffusion of extreme nationalism and forge closer links among hatemongers and those who oppose the notion of equal rights. Migrants and ethnic minorities will become the main target of groups opposing cultural diversity, and are likely to be the victims of xenophobia in many developed countries. This may be a key challenge for democracy and human rights in the coming decades, though it is unlikely to become dominant among the great powers.

Indeed, while extremist nationalism may prevail in some places the dominant worldwide trend is likely to favour a sense of shared humanity. It is unlikely that a credible global alternative to democracy will emerge over the next two decades. The ‘Chinese model’ is seen by some as a real alternative, but it too will be under pressure to deliver greater liberties and scope for participation. It is also unlikely that nationalist forces will take power in any of the major states, or that there will be a return to an ideologically polarised and heterogeneous system similar to that which prevailed during the Cold War. The major powers of the coming decades may affirm their cultural identities, but the diversity of ideological positions among them is huge – from democratic Brazil and India to authoritarian China – such that the scope for ideological convergence is very low.

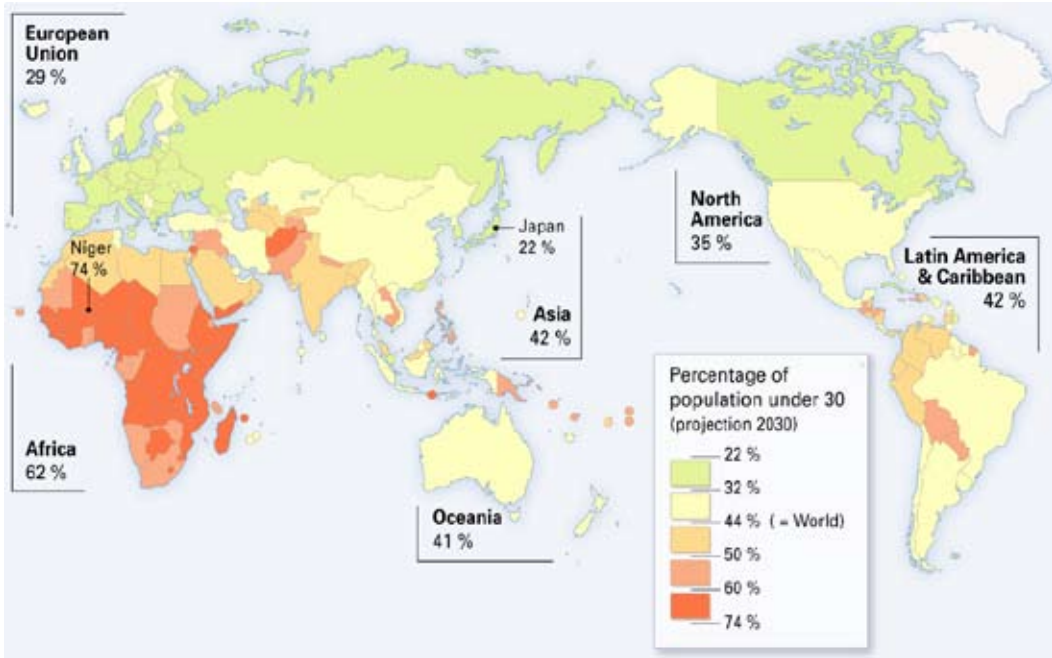
3. Demands for political participation but dangers of populism³⁵

The democratic wave sweeping North Africa is seen by many as a phenomenon linked to the emergence of the social network generation. Young people with bleak prospects at home have begun to share their grievances using information technology, first with an ever-growing circle of friends, and then with their peers in neighbouring Arab countries and beyond. Shared grievances are articulated by young people in other far-away regions as well, particularly in South Asia. They voice similar concerns about corruption, unemployment, political marginalisation and the limits of what is perceived to be propagandistic traditional media.

Demographics coupled with gradual but accelerating access to universal education explain why young people today feel they are a majority with little or no voice. In the Middle East and North Africa, and in southeast Asia, roughly 60 percent of the population is under 30 years old (see Figure 6). This ‘youth bulge’ is even more pronounced in Sub-Saharan Africa, where 70 percent of the population is under 30 years old, compared with only 32 percent in the EU-27. The percentage of those under 30 will decrease significantly in the next twenty years in many countries, but only slightly in Sub-Saharan Africa. The future of many countries will be shaped by the extent to which they take advantage of their demographic dividend. The social, economic and political inclusion of the young generation will be critical. If current employment trends persist, hundreds of millions will either be unemployed or unable to participate in the job market by 2030. Unless appropriate skills are imparted to young people, the ‘demographic dividend’ will become a liability.

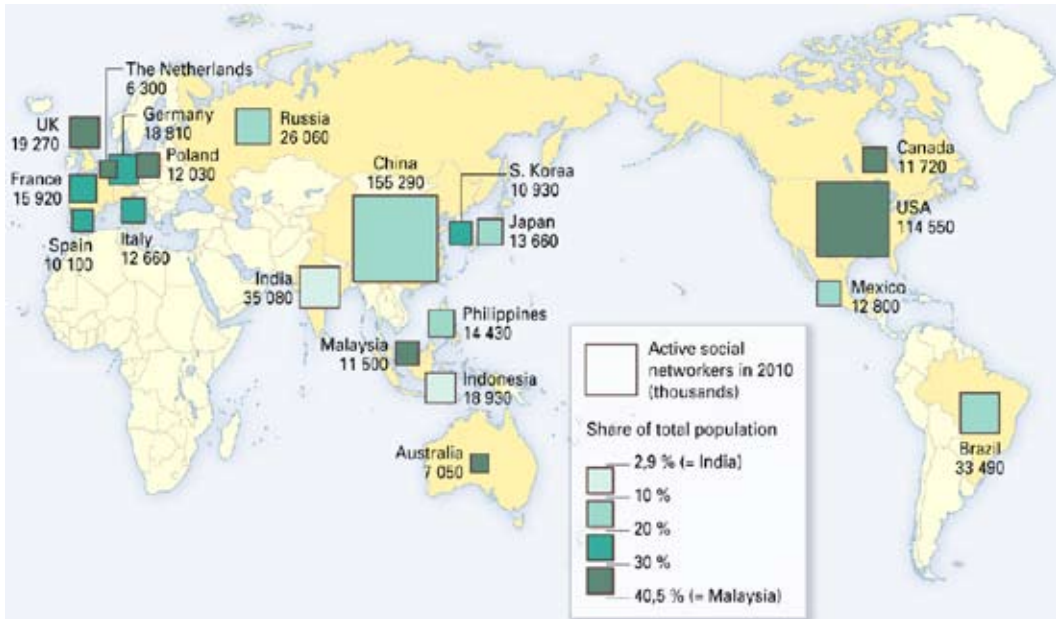
35. This chapter is based on focus groups with ‘young leaders’ in the countries visited during the research phase of the ESPAS project.

Figure 6: Youth population 2030



Source: UN Department of Economic and Social Affairs (2011).

The number of people using the new social media to articulate demands, share opinions, and influence politics is growing everywhere (see Figure 7). Indonesia has experienced the fastest rate of development, and Turkey now accounts for the third highest number of *Facebook* users after the US and the UK. After the revolution in Egypt, the number of internet users in the country jumped from five to slightly over seven and a half million, around 9 percent of the population. Internet use is more common among young men (41 percent of youths aged 18-24 and 21 percent aged 25-34; and 36 percent for young women). In Tunisia, the current figure is a little over two and a half million, including some 0.8 million new users after the revolution, nearly a quarter of the population. The majority of users are in the same age groups, although the proportion of women is higher in this case (41 percent). Social networks are encouraging a growing number of young women to become politically active.

Figure 7: Social networkers 2010

Sources: GWI, UN Population Division and ESPAS team calculations.

Of course, the 2011 youth movements in North Africa are not a new phenomenon. Youth protest movements have been a regular feature of political life in Europe and elsewhere (the events of May 1968 in France are perhaps the most notable example), and they have had a deep long-term impact on societies. What is new about today's movements is that they are less hierarchical and more open and participatory than in the past. Social networks facilitate the expression of shared grievances and aspirations and the exchange of experiences. This has been the case with social networks in Tunisia and Egypt, among other countries undergoing transformative political processes. Over time, these networks will tend to become more globalised as access to the internet becomes universal. Furthermore, the development of digital media facilitates the participation of young women in civic and political movements in countries where women's political participation has been traditionally limited.

The use of online digital media, blogs, social networking sites and related technologies has generated greater civic engagement among people governed by authoritarian regimes, and is likely to continue. By contrast, in the established democracies the use of such media is more often associated with political apathy and passivity. But as young people in Europe, Japan and the US confront rising unemployment and recession, the first signs of

a more politicised use of social networks are emerging (as in Greece and Spain). The political importance of new technologies for political mobilisation and participation was also apparent during the Obama campaign of 2008 in the US. These trends are likely to intensify and may initiate changes in developed societies where networks are already contributing to a sense of empathy across borders.

Gender and politics

Over the last decade there has been an increase in the number of women in national parliaments. According to data from the International Parliamentary Union (IPU), the percentage of women in European and American parliaments stands at around 20 percent, largely as a result of electoral reforms and quota systems.³⁶ In the Nordic countries, women account for 40 percent of parliamentary representatives, while in Arab countries they account for approximately 10 percent. Africa has made substantial progress in this regard, with a 20 percent level of parliamentary representation. Rwanda is a model in the African context: after the 2003 elections it became the first country in the world to have more than 50 percent of women parliamentarians.

More recently, the participation of women in the Arab revolutions has been intense and visible, both in street protests and on the internet. Egyptian women not only demonstrated in favour of democracy but also to claim their rights as women. However, having struggled alongside men to overthrow Mubarak, they face the challenge posed by the emergence of populist conservative Islamist movements such as the Salafists, which espouse traditional patriarchal values. But the political participation of women is very likely unstoppable since they are being constituted as political subjects. Women are also the protagonists of new movements and social changes, and will claim their right to co-determine the political destiny of their communities, countries and regions. Indeed, women are contributing to the global debates in growing numbers, and participating increasingly in human rights, feminist and environmental organisations.

However, the traditional power arenas remain very male-dominated, particularly in parts of the Arab world and Asia. This is especially the case with military forces, traditional political parties, labour unions, and social and religious organisations, in which women find it difficult to express their views and actively participate in decision-making. However, the new youth organisations, which are more open, flexible and make full use of the internet and social networks, are likely to strengthen the political involvement of women in coming decades.

36. Inter-Parliamentary Union, 'Women in National Parliaments, situation as of 31 August 2011', at <http://www.ipu.org/wmn-e/classif.htm>.

Multiple, non-conflicting identities

A number of the leaders of 2030 are likely to rise from among the ranks of today's youths who are already playing a leading role in local and national struggles. The focus group studies in North Africa, Brazil and Asia show that youths share a desire to participate in political debate. This contradicts received wisdom about the political apathy of young people. Young people also share a sense of belonging to a larger community that transcends the place where they happen to live and study. Young leaders in Pakistan, India and North Africa, for instance, express a plurality of identities based on nationality. For them religion is important but not an overriding element of identity.

The Cairo focus group expressed a sense of Arab identity and of feeling 'even more Egyptian' after the revolution. These well-educated youths had a strong sense of belonging, and were clear that they did not 'need an enemy' to unite. Some young leaders also felt they belonged to a larger same-age group, with shared aspirations and a desire for connectivity. As one student claimed, they are not Indian, Pakistani or Bangladeshi but rather '*netizens*' who connect with friends and people who they have never met. This is a recent development that is likely to increase, partly because of the greater political role of social networks and activists' search for larger audiences.

The major ideological challenge for this generation may be finding the right balance between the desire to participate and the affirmation of their national identities. This dilemma was expressed by some Chinese participants, one of whom aspired to a 'peaceful nationalism.' Such a sentiment may simply reflect harmless patriotism, but it could equally become the basis for radical reactions against perceived 'national humiliation.'³⁷

Young leaders did not ascribe to a single dominant mode of political thought. Intellectuals who are described as 'global thinkers' are usually from the region of origin of respondents. Amartya Sen is described as a global thinker in Pakistan and India, which highlights not only his Indian origins but also the fact that his being Indian does not matter to young Pakistanis concerned with development and inequality. In Morocco and Egypt, civic activists cited the late Moroccan Mohammed Abed al-Jabri as having had the most influence upon them. Different Arab thinkers were mentioned who share a national and pan-national notion of democratic and religious or cultural identity. Some also articulated anti-globalisation sentiments because they see globalisation as a Western-led process. In China, there was no common point of reference: the closest to an exemplary figure was the famous blogger Yu Han, which only serves to highlight the extent to which

37. S.L. Shirk, *China: Fragile Superpower: How China's Internal Politics Could Derail Its Peaceful Rise* (Oxford: Oxford University Press, 2007).

the internet is playing a key role in mobilising youths in China. Chinese youths also emphasised that China must forge its own path, since they did not see the West as an example to be followed.

‘Development with dignity’

Young leaders in Asia, North Africa and Latin America share the same concerns and pinpoint similar challenges ahead. In Brazil and Pakistan universal education was almost unanimously seen as the main issue, followed (in Pakistan) by reforming the development model and addressing corruption. A serious concern for Indian youths is growing inequality, widespread corruption, and exacerbated regional identity politics. They refer to two ‘Indias’ in the making: the vast India of the destitute (70 percent) and the India of the affluent (30 percent). Chinese youths feel that the biggest challenge is social inequality, unfair allocation of welfare and opportunities, corruption and (as in India) regional disparities and consequent challenges to national unity. One Chinese participant referred to the division between urban and rural areas and between the coastal and interior areas as a key challenge. In Egypt, where youths are focused on democratisation, the key concerns are building institutions, increasing political awareness, closing the gap between the elites and the population, and neutralising extremism.

As regards the main challenges for 2030, in India the first priority was ‘development with dignity,’ a reference to the eponymous book by Amit Bhaduri, who advocates growth tied to distribution and the systematic elimination of discrimination based on gender, caste, language, religion or ethnicity. Pakistani and Brazilian youths overwhelmingly rank education as their top priority. Young Egyptians stress sustainable development and education. As regards foreign policy, there is no shared pattern except among Pakistanis and Egyptians, who unanimously support the use of force to protect civilians, and among Indians and Brazilians, who virtually all oppose it. Climate change did not emerge as a major concern, given the focus on economic development, although environmental protection is clearly a worry. Chinese youths expressed concerns about growing consumerism and its implications for the environment, particularly pollution in large cities.

Current trends suggest that an alternative to ‘Western’ perspectives on a number of issues is likely to emerge, affecting various issues from development to security. However, values such as democracy and human rights are no longer perceived as distinctively Western but rather as universal. It is likely that the ‘West’ will have lost its political and economic agenda-setting monopoly in twenty years time, although it is unlikely that any other single alternative agenda-setting actor will become hegemonic.

Participatory democracy

The Egyptian revolution was led by a largely educated information technology (IT)-savvy youth seeking a voice in the political process. Participants in focus group discussions, called for new forms of political control and participation, including checks and balances on central power at the sub-state level. These youths feel it is essential to establish democratic control over decision-making through channels other than elected representatives. As one Egyptian activist put it, for anyone wanting power in twenty years' time, it will be crucial to prioritise the creation of local mechanisms to control government action; or as another participant stated, it is insufficient to wait for elections every four years to monitor and influence political decisions.

In India and Pakistan the dominant view is that political parties are closed to generational renewal because of the weight of dynastic politics. In Egypt, where there has been a revolution against dynastic politics, involvement in political parties was described as necessary, and counter-hegemonic activism is generating a multitude of civil society initiatives and a surge in political party affiliation. Participants claim that political parties should not have a monopoly on political life and that social networks must remain active, if only to pressure democratic governments to keep their promises.

It is likely that news production will cease to be the preserve of professional journalists because of the expansion of 'citizen journalism,' whereby citizens become producers and not just passive consumers of news. This has been triggered by slow reform processes leading to genuine press freedom, particularly where years of state control has virtually eliminated unbiased journalism. As a young Tunisian leader said, young activists have been forced to do the job that journalists have failed to perform. Participatory journalism is perhaps the most evident manifestation of this new trend.

Political parties will have less of a monopoly on politics: different networks and civil society organisations will provide important platforms for a new generation of activists who wish to influence and shape the political agenda and also to deliver public goods. Some of those who come to power in 2030 will have become politicised in large measures through social network activism and will be comfortable using such technologies.

Participatory journalism

Citizens' journalism, the idea that ordinary people can collect, report and analyse and disseminate news and information, has played a major role in Egypt's democratic transition. With 9 percent of its population connected to the web (nearly seven and a half million people), the internet played a key role in keeping people informed and mobilised during the uprising, despite deeper censorship and violent repression. Google Maps, a free open-source geo-localisation tool, proved to be particularly useful for 'citizen journalists' to organise protests and pinpoint the location of demonstrations and even repressive forces. They used it to upload and make public text, photo, video, or audio information, more specifically by generating a map with the exact geo-location of events via Google Maps or a 'proxy' platform. Every map thus generated has its own topic and all the information in the map is related to this topic. Two good examples of tools/platforms using Google Maps are:

U-shahid (<http://u-shahid.com/>): this is a non-profit company that develops free and open source software to collect and visualise information and to permit interactive mapping. *U-shahid* maps were used to monitor popular resistance in Egyptian streets during the events of 25 January 2010 (<http://u-shahid.com/25jan/>), and to supervise the constitutional referendum of March 2011 (<http://u-shahid.com/19mar/>).

Nijel is a US-based company that has created an online mapping system to track incidents of sexual harassment. The project will run on the *U-shahid* platform, funneling SMS submissions to a map displaying sites of harassment, thus helping women to (safely) report offences to the authorities, and drawing attention to the problem of violence against women in Egypt.

This will present new challenges for representative institutions and political parties, and may open the way for new forms of rightwing and leftist populism. In the West, new types of protest and anti-establishment politics may emerge, given discontent with institutions as a result of the expectations gap,³⁸ growing income disparity and inequality (the squeezing of the middle class in the West), and the tectonic global power shifts that are limiting the power of countries that were used to being major global players. In the US, the introversion and isolationism apparent on the extreme right – with its appeals to old myths that offer people a false sense of security – exemplify how deep changes in the political, social and economic spheres may destabilise traditional liberal democratic politics.

38. A Pew Research Centre poll shows that only 22% of American citizens say they can trust the government almost always or most of the time – ‘among the lowest measures in more than half a century.’ Pew Research Centre, *Distrust, Discontent, Anger and Partisan Rancor. The People and Their Government*, 18 April 2010, at <http://pewresearch.org/pubs/1569/trust-in-government-distrust-discontent-anger-partisan-rancor>.





Part II

**Greater human
development but
inequality, climate change
and scarcity**



4. A rising middle class but persistent poverty and inequality

A core political issue in coming decades will be human development. This will be a concern not only in the poor regions of the world but globally. Human development will be seen as a function of economic growth, but it will also involve broader issues such as social justice, transparency, the environment and climate change, access to water and the prevention of food scarcity. First and foremost, human development will likely be regarded in most developing economies as a means to bring people out of poverty, and there will be an increasing policy focus on sustainable development.

The long-term after-effects of the 2008 economic crisis may counteract this aim, but it is likely that absolute poverty will continue to fall, and the ranks of the middle class will continue to swell in the increasingly affluent societies of Asia and Latin America. However, overall inequality will also tend to increase. The 2008 crisis is likely to have an enduring impact on citizens' well-being in Europe and the US, creating a category of 'new poor' and shrinking the middle class.

Moreover, the Western growth model is, for the first time in history, being questioned as unsustainable and many experts and citizens alike feel that its global spread cannot be maintained. A central issue in the future will therefore be the extent to which the major economic powers of the past fifty years can reformulate their growth model and build new competitive advantages.

One crucial issue in the reformulation of economic policy is to determine the role of financial markets in development and sustainability. It has been argued that the main cause of the 2008 crisis was the decoupling between society and the economy resulting from the unregulated power of the finance sector.³⁹ It has also been noted that the financial sector must be reformed and submitted to the logic of serving society: 'finance is a means to an end, not an end in itself. It is supposed to serve the interests of the rest of society, not the other way around.'⁴⁰ It is uncertain whether decision-makers will accept these views, but the relationship between financial markets and sustainable development will be a central question for the foreseeable future.

39. A. Touraine, *Après la Crise* (Paris: Seuil, 2010).

40. J. E. Stiglitz, 'Taming Finance in an Age of Austerity', *Project Syndicate*, 8 July 2010, at www.project-syndicate.org/commentary/stiglitz127/English.

In addition to being shaped by these debates, citizen well-being will be affected by various other factors. Five key trends are likely to shape the global economic system over the next 20 years: rising wealth in the developing world; a shift in the centre of economic gravity to Asia and South America; demographics, characterised by ageing in the West and in East Asia and a still rising population in Africa and southeast Asia; continued threats of financial instability; and pressures to increase output and trade in agriculture and services and to green the economy, leading to more trade.

Rising wealth in developing economies

The world economy has undergone dramatic transformations over the last three decades. In the last decade alone, the number of countries classified as low income fell from 66 to 40. Absolute poverty has fallen: between 2005 and 2010 the number of people living on less than USD 1.25 – the World Bank measure of absolute poverty – was reduced by half a billion.⁴¹ Extrapolating from recent economic trends, many projections for 2030 suggest that the emerging economies will continue to converge with the advanced economies in terms of *per capita* income.⁴² It is expected that global poverty will decline significantly, especially in Asia. Moreover, the middle class is set to expand in many countries. Over the last decade, about 70 million people per year joined the ranks of the middle classes. It is predicted that by 2030 just above half the world population may belong to the latter social category.

As of 2011, however, only the small, highly dynamic economies in Asia (the newly industrialised Asian economies) have managed to converge fully with the advanced economies in terms of *per capita* income. If current trends persist and existing projections are correct, Brazil and China will rise to join the higher tier of middle income economies. *Per capita* incomes in the southern and eastern coastal regions of China (Guangdong, Fujian, Zhejiang, Jiangsu, Shandong and Liaoning provinces), which had a GDP ratio between USD 5,000 and 9,999 per person in 2010, are likely to reach levels similar to those of advanced

41. G.G. Gertz and L. Changy, 'Two Trends in Global Poverty', *Global Economy and Development Programme*, Brookings Institution, May 2011, p. 1, at http://www.brookings.edu/~media/Files/rc/opinions/2011/0517_global_poverty_trends_changy/0517_trends_global_poverty.pdf.

42. U. Dadush and S. Ali, 'The Transformation of World Trade', *Carnegie Endowment for International Peace Policy Outlook*, February 2010, at http://carnegieendowment.org/files/Transformation_of_World_Trade.pdf; U. Dadush and B. Stancil, 'The World Order in 2050', *Carnegie Endowment for International Peace Policy Outlook*, April 2010, at http://carnegieendowment.org/files/World_Order_in_2050.pdf; Gertz and Changy, op. cit. note 41; D. Wilson and R. Purushothaman, 'Dreaming with BRICs: The Path to 2050', *Goldman Sachs Global Economics Paper no. 99*, 1 October 2003; J. Hawksworth, *The World in 2050*, PricewaterhouseCoopers, March 2008; J. Hawksworth, *Convergence, Catch-Up and Overtaking: How the Balance of World Economic Power is Shifting*, PricewaterhouseCoopers, January 2010; H. Kharas, op. cit. in note 4; A. Maddison, 'Shares of the Rich and the Rest in the World Economy: Income Divergence between Nations, 1820-2030', *Asian Economic Policy Review*, vol. 3, no. 1, June 2008, pp. 67-82; G. Magnus, *Uprising: Will Emerging Markets Shape or Shake the World Economy?* (London: Wiley, 2010). United Nations, 'World Population Prospects – The 2010 Revision,' UN Department of Economic and Social Affairs, Population Division, Population Estimates and Projections Section, 2011. Available at: <http://esa.un.org/unpd/wpp/index.htm>.

economies, although China's overall *per capita* income is only expected to be one third of that of the United States' in 2030.⁴³

A shift of economic gravity to Asia and the developing world

The emergence of China on the global economic stage has been the main economic development with major political consequences over the past decade. By 2030, China is likely to be the world's largest economy while the EU-27 is expected to become the third biggest economic entity, a shift from its first place position today. India is currently the world's second most populous country, and has experienced steady growth over the last two decades. Many analysts expect it to be the next economic 'superpower', matching or even overtaking China by the middle of the twenty-first century. But India still lags behind China. Its economic policies are less amenable to a massive transition to labour-intensive manufacturing, which would be necessary for sustained economic take-off in such a labour-abundant country.

Some African economies have experienced an encouraging boom in the last decade. But this is a recent phenomenon that has been boosted by the high commodity prices caused by the rise of Asia and China in particular. The economic performance of commodity producers such as Brazil, Argentina, Russia or Nigeria must be reassessed when oil, metals or soy bean prices fall as China's economic growth rate slows down (see Figure 8 on projected GDP).

A major concern for the global economy may be the very slow growth of the European and US economies, although signs of economic overheating in Asia, notably in China and India, and in other emerging economies such as Brazil are also worrying. Uncertainty about the economic performance of these emerging states will also have an effect on global economic prospects given their increasing weight in the world economy. However, it is unclear to what extent these large emerging economies will become dominant; whether Western global production chains will remain dominant or be replaced by Asian chains, and if so, how these emerging giants will share command of global production chains.

43. G. Fisher et al, 'China's Agricultural Prospects and Challenges: Report on Scenarios Simulations until 2030 with the Chinagro Welfare Model Covering National, Regional and County level', *CATSEI Report*, Centre for World Food Studies (SOW-VU), December 2007, pp. 38-40; The Economist, 'Special Report China: Rising Power, Anxious State', *The Economist*, June 2011, pp. 1-3, at <http://www.economist.com/node/18829149>; The Economist, 'Special Report: The World Economy. A Game of Catch-up', *The Economist*, 24 September 2011, at <http://www.economist.com/node/21528979>.

Figure 8: Projected GDP and GDP per capita by 2030



Source: Maddison (2008).

Demographics: ageing and slow growth in the West and East Asia

Demographics are also significantly changing global economic relations. Populations in advanced economies are ageing, labour forces are shrinking, and there is a strong relative decline in population compared to the emerging economies.⁴⁴ These trends are likely to have a powerful impact on the global economic weight of the advanced economies. But

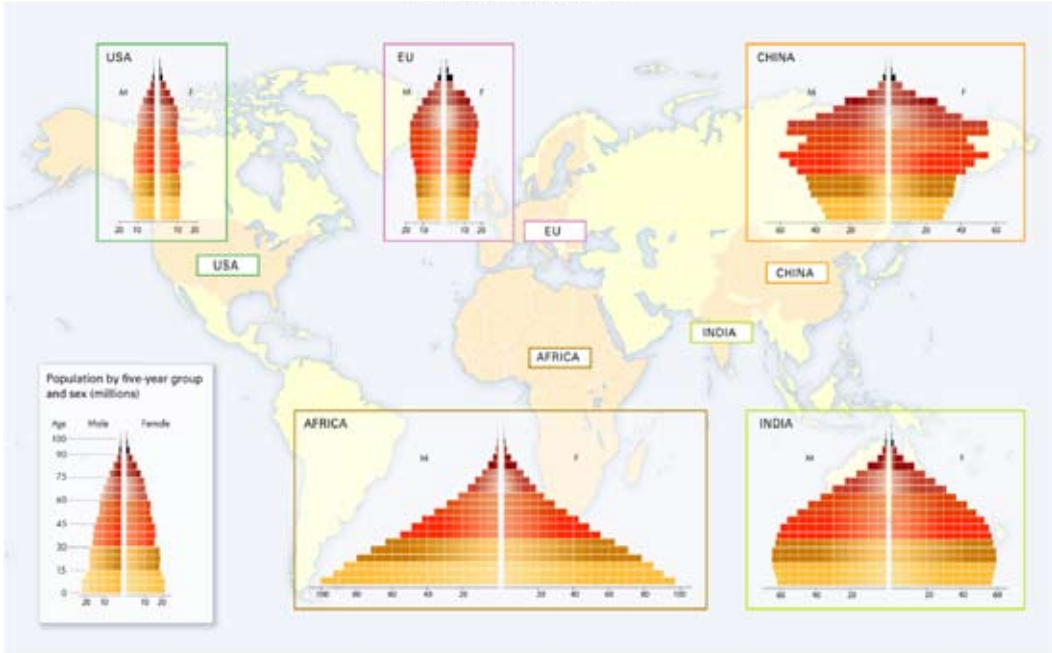
44. In 2000, the population aged 60 years or over numbered 600 million, triple the number for 1950. In 2009, it surpassed 700 million and by 2050 it should reach 2 billion. Population ageing is pervasive and global, but there are important differences between developed and non-developed countries in terms of absolute and relative numbers of older persons. In developed countries, over a fifth of the population is currently aged 60 years or over and by 2050, nearly a third of the population in developed countries is projected to be in that age group. In the less developed countries, 'older persons account today for just 8 percent of the population but by mid-century it is likely that they will have reached the same stage in population ageing of the developed world if fertility rates do not change. The country with the youngest population in 2009 was Niger (median age of 15 years), and the country with the oldest population was Japan (median age of 44 years). Over the next four decades, the median age of the world population should increase by nearly 10 years, and reach 38 years in 2050. By that time, most of the nine 'youngest' countries (where the median age of the population is expected to remain below 25 years), will be in Africa, and the oldest populations are expected to be in Japan and the Macao Special Administrative Region of China, whose median ages are projected to surpass 55 years. UN Department of Economic and Social Affairs, *World Population Ageing 2009*, Population Division 2010, at <http://www.un.org/esa/population/publications/WPA2009/WPA2009-report.pdf>.

there is a slowdown of population growth and the prospect of population ageing in other regions experiencing rising levels of prosperity, with effects on growth and pension liabilities. Sub-Saharan Africa and South Asia, however, will continue to experience steady population growth and strong youth bulges.

There will be a shift in the configuration of the global working population (see Figure 9). By 2030, India is projected to be the country with the most numerous working-age population (age 15 to 64). The 15-29 year old group in India will number around 370 million, and the 30-44 year old group around 343 million. China's workforce will remain stable in absolute numbers (ca. 970 million), but its share in the total Chinese population will decrease from 71.4 percent to 67 percent. The 30-44 age group will slightly decrease from 333 million in 2010 to 312 million in 2030. The younger age groups in China will shrink as older age groups increase, leading to the growth of the old age dependency ratio. Africa will be the youngest continent: its under 15 years of age group will be five times larger than that of the US and Europe combined. The economies and political systems of emerging and developing countries will be under pressure to generate and spread opportunities or face instability. These regions will also provide a great share of skilled and unskilled global labour migrants in the years leading up to 2030, and they will make a vital contribution to sustaining the economic development of industrialised countries.

Demography and migration

The economic crisis of 2008 has also had an important impact on human mobility and may lead to a considerable shift in migration patterns. As the economies of traditional host societies in Europe and North America struggle to recover in the midst of declining job and profit opportunities, migrants may decide to return definitively to their countries of origin, or to engage in 'circular' migration. If the impact of the crisis endures, it may also lead nationals of developed countries to migrate, transforming many traditional 'host' countries into societies that export migrants. Economic volatility will also impact on migration flows. Spain, for example, had shifted from being a historically major source of emigrants to being a destination country for migrants, but since the start of the economic crisis in 2008 is again in danger of becoming an emigration country.

Figure 9: Population age structure by 2030, by five-year groups

Source: UN Department of Economic and Social Affairs (2011).

The most important factor in determining future flows of migrants will be the policy choices of host countries. The last twenty years have seen the increasing globalisation of migration, as new migration flow patterns have emerged, involving all the parts of the world as departure, arrival or transit countries. The globalisation of migration will continue to expand due to increased factors of mobility such as greater availability of information for discerning migrants, broader diasporas that facilitate migration and settlement, and changes in the drivers of migration. The most important traditional drivers of migration – the differences in economic opportunity and/or personal security between source and destination countries – will be increasingly complemented by differences in dependency ratios that encourage changes in immigration policy in many host countries. Climate change may also have more of an influence on future migration flows.

While the dominant migration destinations of the latter half of the twentieth century will continue to attract people (North America, Western Europe and the Persian Gulf), increasing numbers of migrants will move toward new destination zones in quickly developing countries. Improvements in education, access to information, and urbanisation

in many regions will also increase the rate of migration, encompassing people that were traditionally less mobile, including women, children, the very old or the very poor.

According to the United Nations Development Fund for Women (UNIFEM), women currently constitute half of the estimated 200 million migrants worldwide, and more and more women migrate independently.⁴⁵ Women migrate in search of new economic opportunities and employment, often to help their families in their country of origin. They thus contribute significantly to the economies of their countries through remittances. They are also often the sole or primary providers for their families, and therefore acquire a greater sense of independence and self-sufficiency in the process. However, migrant women are also subject to multiple hazards, such as trafficking for sexual exploitation, harsh undocumented domestic work conditions, double discrimination, and a lack of protection against sexual violence and gender abuse.

Ongoing financial instability

Financial markets have been affected by recurrent instability and turbulence. With the 2008 collapse of Lehman Brothers, Europe and the US have become engulfed by sovereign debt crises, a problem that many felt no longer applied to the advanced economies.⁴⁶ These intractable public debt burdens are a threat to the global economy, and will certainly accelerate the shift of economic power from the advanced to newly emerging economies. In 2007, emerging market economies accounted for 25 percent of world GDP and 17 percent of world public debt. By 2016, they are expected to produce 38 percent of world GDP and account for only 14 percent of world public debt.⁴⁷

Structural financial sector problems remain endemic. On both sides of the Atlantic, the banking sector has become more oligopolistic, increasing the costs of financing and investing, and moral hazard has increased after the massive bank bailouts. In Europe, future financial stability will depend greatly on the capacity of its political leaders to avoid economic fragmentation and find long-term solutions to re-organise the economic and political governance of the eurozone, to establish fiscal union. Beyond the West, financial sectors in China and other major emerging economies are building up liabilities amidst economic overheating, housing market bubbles and industrial overcapacity. A shock to output (such as a significant demand slowdown, or changes in monetary or fiscal poli-

45. UNIFEM, *Progress of the World's Women 2008/2009: Who Answers to Women? Gender & Accountability*, 2008, p. 58. Available at: <http://www.unifem.org/progress/2008/>.

46. K. Rogoff and C. Reinhart, 'This Time is Different: A Panoramic View of Eight Centuries of Financial Crises,' *National Bureau of Economic Research Working Paper*, 16 April 2008.

47. Ibid.

cies) could destabilise China's banks and financial institutions. This could, in turn, derail the currently high levels of growth there.

As a result of financial crises and ensuing lower growth rates, emerging economies could end up much poorer than hoped for. Significant political turbulence could result from the frustration of popular expectations of higher standards of living generated during the recent growth spurt.

Output and greening pressures

Over the last five years, food prices have increased dramatically, with a clear impact on the world's poorest, with widely reported political consequences (in the Middle East in 2011, for instance). By 2030, barring major shocks to the world economy, such as new macroeconomic turbulence or widespread crop failures and reduced agricultural output, it is likely that the historical trend towards lower agricultural prices will resume by the 2020s. Technological innovation and related yield and productivity increases, slightly higher levels of trade, and land-use expansion will have contributed to substantial agricultural development. Latin America and sub-Saharan Africa are likely to be major beneficiaries of this trend. However desertification will very probably challenge this trend in some critical regions, particularly in Asia and Africa.

Industrial production will remain central to the generation of wealth. The development of technologies and goods that facilitate the transition to a less carbon-intensive economy is likely to receive a boost because of the pressures of high commodity prices, which are expected to remain high during much of the 2010-2020 decade, and also because of the expected rise in national policies to reduce carbon emissions.

Off-shoring industrial production will intensify. The 2008 crisis and its after-effects are putting significant cost pressures on firms, but off-shoring will continue to generate jobs for less creative, more labour-intensive production in less advanced economies. In the advanced economies, high-skills job creation in industry will resume once post-crisis recovery is on track.⁴⁸

The service sector is likely to undergo the most dramatic transformation by 2030. Six main drivers come together to put pressure on services to expand substantially: the rapid pace of urbanisation; the continuing spread and deepening of the ICT revolution; continued industrialisation in the emerging world, which brings with it a growth in services;

48. OECD, 'Persistence of High Unemployment: What Risks, What Policies?', OECD Economics Department Policy Notes no. 5, 2011.

a strong lag of productivity in services in comparison to manufacturing; the rise of the middle class in the developing world, and continued rising consumer demand in advanced economies; and increasing pressures on income-constrained and/or debt-laden advanced and emerging governments to privatise healthcare, education, transport and infrastructure services.

Cross-border trade and investment, in particular in services, are bound to grow significantly as a consequence of the above trends. World Trade Organisation (WTO) members will find it in their interest to negotiate services (in the Doha Round) more seriously than they have done to date. But whether this happens will depend largely on how global governance and competition evolve.

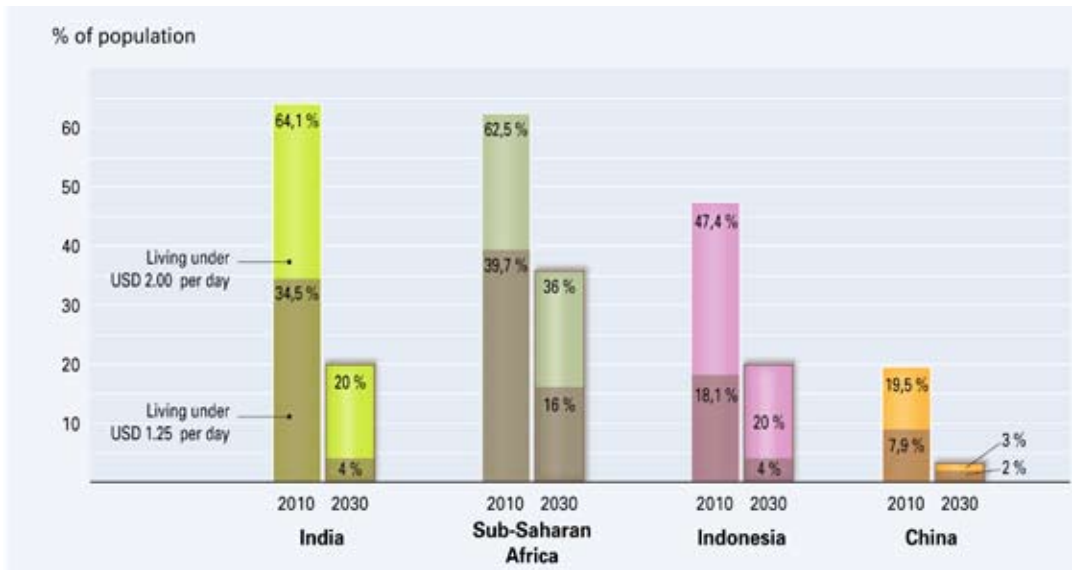
Less abject poverty, but persistent poverty and inequality

Absolute poverty will diminish over the next two decades, but areas of extreme poverty will remain, potentially entrenching existing gaps between rich and poor (see Figure 10). Inequality may become even more acute in Asia and Africa. High levels of inequality will persist not only between states, but also (or indeed mainly) within societies. Despite a large increase in GDP per capita, certain countries (particularly India) have failed to invest in crucial areas of human development. In the long run, neglecting citizens' quality of life, especially when wealth remains (unduly) concentrated in the hands of a few may lead a country like India to social and economic breakdown.⁴⁹ However, no developing economy is expected to converge fully with advanced country *per capita* income levels in the coming 20 years. In 2030 most countries will have middle-income status.

A recent projection, estimates that the number of people living in the most absolute poverty (income below USD 1.25 per day) will be significantly reduced by 2030: from eight to just two percent of the population in China; from more than one third to just four percent in India; and from two-fifths to 16 percent of the population in sub-Saharan Africa.⁵⁰ But poverty is projected to remain entrenched in some regions; in 2030 more than one third of sub-Saharan Africans and one fifth of the Indian and Indonesian populations will still be living on less than USD 2 per day. This suggests that inequality will increase significantly. These projections need to be treated with caution, Not least because a changing international economic environment and national economic and social policies could have a significant impact on them, but the figures do point where current poverty reduction trends are heading.

49. A. Sen, 'Quality of Life: India vs. China', *The New York Review of Books*, 12 May 2011, at www.nybooks.com/articles/archives/2011/may/12/quality-life-india-vs-china/.

50. U. Dadush and B. Stancil, *op. cit.* in note 42, p. 16.

Figure 10: Projected poverty in key regions 2030

Source: Dadush & Stancil (2010: 16).

In 2030, 57 percent of the projected world population of 8.3 billion will be middle class, with 85 percent of the growth in this group occurring in Asia.⁵¹ But the emergence of a new middle class will not eliminate poverty and inequality. Indeed, most poor people will live in middle income countries by 2030; and the highest levels of income and status inequality will be found in the poorest, most stagnant economies, and in resource-dependent countries in Africa and Latin America. This is likely to remain the case in 2030.

Despite substantial progress, the MDGs will not all be met by 2015. The most blatant failures are expected in sub-Saharan Africa and parts of South Asia, where targets ranging from poverty reduction to improvement in sanitary conditions, the education of girls, fighting malnutrition, eradicating malaria and AIDS, are likely to be missed. Although further progress is expected, in some regions these goals may not have been met fully even by 2030.

Poverty and socio-economic inequality will take various forms. The rural-urban income gap is likely to rise in developing countries. Poverty will be entrenched in rural areas, which have less infrastructure and public services such as education and healthcare. The slow rate of adoption of basic technologies, such as improved irrigation techniques, and

51. H. Kharas, op. cit. in note 4, p. 27.

of more advanced technologies, such as information and communication technologies, will further impair the ability of poor rural areas to close the income gap.⁵²

Urban poverty will also remain a major challenge, especially in low-growth countries in Africa and South Asia that are unable to absorb rural migrants into labour-intensive industrial or services activities. Weakly enforced property rights, underinvestment in infrastructure and under-provision of public services (water and sanitation, transport, education, and healthcare) will continue to plague sprawling slums in many countries. No developing or emerging economy is expected to converge fully with the *per capita* income levels of the advanced economies over the next twenty years. The severe governance challenges that lie ahead for these countries stand in the way of the generation of high levels of wealth, greater redistribution and prospects for more equal rights.

Big high-growth emerging economies such as China, India, Mexico and Brazil, but also Russia, face rising levels of corruption. Government relations with a new class of powerful, well-connected businessmen heading giant conglomerates are often too 'cosy.' To promote growth and a more effective 'trickle down effect' it will be necessary to enforce competition policies and the rule of law, to curb rent-seeking and market restrictive behaviour in often oligopolistic or monopolised markets; equally, public services must be expanded, prices must be lowered for consumers, competitors and small and medium enterprises (SMEs) must be allowed to develop, and, more generally, economic actors must have an even playing field in the face of bureaucracy and the courts.

The governments of many emerging economies have shown a marked inability to develop consistent policies to improve citizens' quality of life, investing in basic health care, education, nutrition, reducing social inequalities, providing housing, and guaranteeing access to information and basic political and civil rights. However, performance in these areas varies across countries and tends to converge with overall income levels. While Brazil has succeeded in implementing targeted social transfers (the *bolsa familia*) to the poorest and China has established almost universal education, the failed and fragile states of Africa have been unable to provide the most basic social services. The latter will continue to struggle to 2030. In the decades to come, more emerging economies are likely to follow Brazil and place greater emphasis on social policies, in particular due to increased pressure from their middle classes, as is already the case in China.

Many resource-dependent economies, notably in Africa but also in Central Asia and pockets of Latin America, could continue to suffer from the 'resource curse,' which slows down growth and development. Revenues from commodity exports lead to currency ap-

52. World Bank, *Global Economic Prospects: Technology Diffusion in the Developing World*. Washington D.C., 2008.

preciation, and make manufacturing and services exports less internationally competitive, hindering economic diversification. Local mineral and raw material resources are often captured by elites and the government to extract rents. In many countries authoritarianism and corruption are prevalent. Governments under-invest in infrastructure and human capital. One example among many is Equatorial Guinea. Despite a high *per capita* income of USD 22,000 it only provides an average of five years of schooling and life expectancy is 51 years.

Universal primary education plays an essential role in national development and growth. UNESCO estimated that if all students in low-income countries were to finish primary school, the level of world poverty could be reduced by 12 percent.⁵³ UNESCO indicates that for each additional mean year of schooling for its citizens, the average annual national GDP could increase by 0.37 percent, along with a 10 percent increase in the earning power of the individuals receiving additional education. Although there has been progress in literacy rates and primary school enrolment, particularly in the developing world, major investment (and progress) is still needed for education to generate development and wealth. This is especially the case for female education (notably in Asia and Africa) and the fight against early dropout rates (in Latin America), both of which require long-term policies and consistent resources. In regions where a significant increase in enrolment in primary education has been attained (as in sub-Saharan Africa and parts of South and West Asia), there has been important progress in Human Development rankings.

Health issues and policies will also have a major impact on the reduction of poverty and inequality. Health is usually an overlooked variable in studies of social, economic and political development. Until most recently, when researchers integrated health into their models and forecasts, the focus was only on major epidemic diseases, such as HIV-AIDS or malaria. But non-communicable diseases (NCDs), comprising mainly cardiovascular diseases, diabetes, some cancers and chronic lung diseases, are the biggest global killers and a leading cause of preventable morbidity and disability.

NCDs have a serious negative impact on human and economic development and incur huge social and economic costs in the Western developed nations, in the emerging economies, and in the low and middle income countries. By 2030, NCDs will exceed communicable, maternal, perinatal, and nutritional diseases as the most common causes of death, even in Africa. About one quarter of global NCD-related deaths take place before the age of 60. There are as many deaths among women as among men, with the poor be-

53. UNESCO, *Education Counts – Towards the Millennium Development Goals* (Paris: UNESCO, 2010). Available at: <http://unesdoc.unesco.org/images/0019/001902/190214e.pdf>.

ing disproportionately affected. Despite this compelling evidence, NCDs have not been part of the mainstream public health agenda. This is finally changing, as shown by the recent UN High Level Summit on NCDs, which provides a framework for countries to galvanise action at the domestic level. However, much more needs to be done, particularly in terms of funding and programmatic priorities.⁵⁴

The economic impact of NCDs translates into losses in terms of economic production, income, and productive life years. A study of 23 countries that account for around 80 percent of the total burden of chronic disease mortality in developing countries indicates that if no action is taken an estimated USD 84 billion of economic production will be lost due to heart disease, strokes, and diabetes alone between 2006 and 2015 (see Figure 11).⁵⁵ The World Economic Forum (WEF) now ranks NCDs as one of the top global threats to economic development.⁵⁶ It is estimated that for every 10 percent rise in NCD mortality, annual economic growth is reduced by 0.5 percent.⁵⁷ Income loss over a 10 year period is expected to be more than USD 550 billion in China.⁵⁸ Emerging countries, which are home to more than half of the world's population, are estimated to lose 20 million productive life years annually due to NCDs. A recent report has estimated the global economic burden of NCDs in 2010 and projected the size of the burden through 2030. Macroeconomic simulations presented suggest a cumulative output loss of USD 47 trillion over the next two decades.⁵⁹

Fortunately, NCDs are largely preventable. The price tag or cost-per-head of the population is low – under USD 1 in low income countries, USD 1.5 in lower middle-income countries and USD 3 in upper middle-income countries.⁶⁰

54. UN General Assembly, Political Declaration of the High level meeting of the General Assembly on the Prevention and Control of Non-communicable diseases, 30 September 2011, at <http://www.ncdalliance.org/sites/default/files/UN%20Political%20Declaration%20on%20NCDs.pdf>

55. D. Abegunde et al. 'The Burden and Costs of Chronic Diseases in Low-Income and Middle-Income Countries', *The Lancet*, vol. 370, no. 9603, December 2007, p. 1931.

56. World Economic Forum, *Global Risks 2010*, Global Risk Network of the World Economic Forum, Geneva, January 2010, p. 24, at http://www3.weforum.org/docs/WEF_GlobalRisks_Report_2010.pdf.

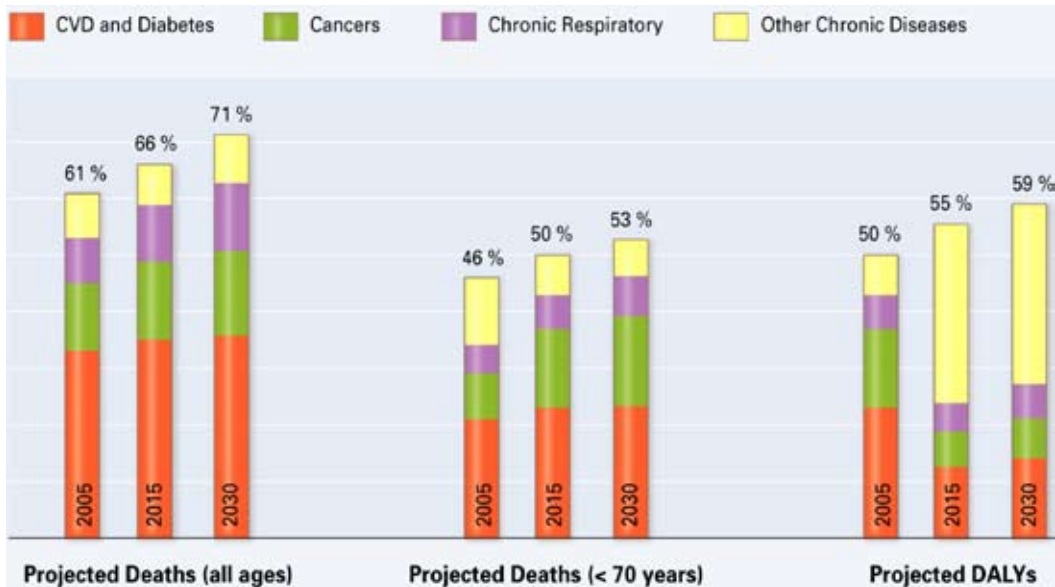
57. D. Stuckler et al, 'Drivers of Inequality in Millennium Development Goal Progress: A Statistical Analysis', *Public Library of Science Medicine*, vol. 7, no. 3, March 2010.

58. R. Beaglehole et al, 'UN High-Level Meeting on Non-Communicable Diseases: Addressing Four Questions', *The Lancet* vol. 378, no. 9789, 30 July 2011, pp. 449-455.

59. D. E. Bloom et al, *The Global Economic Burden of Non-communicable Diseases*, World Economic Forum, Geneva, September 2011, at http://www3.weforum.org/docs/WEF_Harvard_HE_GlobalEconomicBurdenNonCommunicableDiseases_2011.pdf

60. WHO, 'Scaling up Action against Non-Communicable Diseases: How Much Will it Cost?', Geneva, 2011.

Figure 11: Chronic diseases



DALYS = Disability-affected life years

Source: Abegunde et al (2007: 1931).

Women and development

The participation of women in the labour market and in business is growing, and there is increasing recognition of their contribution to human development through reproductive and care work. However, the economic crisis has exacerbated the fate of poor women, as women are especially vulnerable to withdrawal of social services.

Women’s economic participation is unbalanced in all areas. The problem begins with difficulty of access to education and health, the social discrimination experienced by girls disadvantaged by teenage pregnancies, and continues with obstacles to gaining access to work and professional development, salary discrimination and unequal access to credit, training, technologies and economic resources in general.

Gender inequality is currently a major cause of poverty around the world. There is growing recognition that strategies to combat poverty will only be effective if a gender equality perspective is adopted. The large investment in micro-credit assistance to women, for instance, has largely failed to help women to overcome social and gender inequality.

Only by supporting a reconciliation of work and family responsibilities, combating gender violence, improving sexual and reproductive health, increasing access to education, fighting stereotypes and encouraging measures to promote true autonomy in decision-making can sustainable results be achieved in combating poverty among women.

Economic crisis and adjustment policies deepen the feminisation of poverty and survival, forcing women to demand fair and redistributive social policies and specific policies to promote equality of opportunities (including affirmative action). Ultimately, equality policies are a key to combating the feminisation of poverty and poverty in general. The inclusion of women will remain a fundamental development challenge in the coming decades.

Inequality and the hyper-rich

According to a recent OECD report, inequality has risen over the last three decades.⁶¹ From the mid-1980s to the late-2000s, the Gini index in almost all OECD countries increased, on average, from 0.29 to 0.316.⁶² In the 20 years prior to the current economic crisis, real disposable household incomes in OECD countries increased by an average 1.7 percent a year, but in most of these countries the incomes of the richest grew faster than those of the poor (except in France, Japan and Spain), thus widening income inequality (see Figure 12). In the OECD, the richest ten percent earned nine times as much as the poorest ten percent of the population. This income gap is particularly pronounced in Mexico and Chile (27:1), but also in Israel, Turkey and the United States (14:1). In Europe, the biggest income disparities between rich and poor appear in the UK and Italy (10:1).

A striking feature of this long-term trend towards higher inequality is that even traditional low-inequality countries like Denmark, Sweden and Germany have been affected. At the same time, some high-inequality countries like Mexico and Turkey have succeeded in closing the gap somewhat, but levels remain very high nevertheless.

Despite a considerable increase in inequality in the EU, this economy remains one of the most egalitarian in the world. This becomes especially apparent when inequality is compared to emerging economies. While Brazil, Indonesia, and to some extent Argentina, have managed to reduce inequality in the last 20 years, all three, together with China, India, Russia and South Africa, continue to have income inequality levels significantly above the OECD average.⁶³ The main driver of higher inequality is the unequal distribution of wages and salaries.

61. OECD, *Divided We Stand: Why Inequality Keeps Rising* (Paris: OECD Publishing, December 2011), pp. 22-23.

62. The Gini index is a measure of inequality. It can range from 0 (perfectly equal distribution of income) to 1 (all income is earned by just one person).

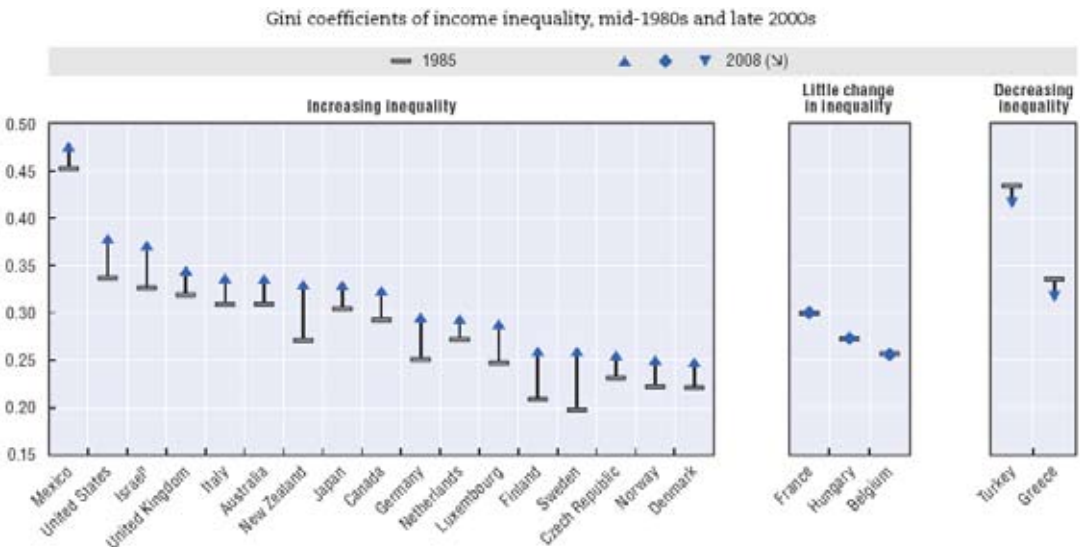
63. OECD, op. cit. in note 61, pp. 48-49.

The salaries of top earners have risen more rapidly than those of medium- and low-income groups. Highly skilled labour has been rewarded by integration in trade and financial markets as well as technological progress while less skilled labour has fallen behind.

Evidence of the impact of globalisation and technology on inequality is mixed. In practice, it is very difficult to disentangle technological change from globalisation patterns that also increase the value of skills. Widening disparities and wage gaps have increased with the rise in part-time employment, especially in Europe, the reduction of unemployment benefits, and changes in the size and structure of households.

Policy choices, regulations and institutions can play an important role in tackling this problem, but connecting these factors with earnings inequality is not straightforward, as policy reforms may have counteracting effects on employment and wage inequality. The central role of education in increasing the skills of the low-skilled is seen as the best means to reduce inequality.

Figure 12: Rising income inequality in OECD countries



Source: OECD (2011a).

In advanced OECD economies, income inequality has tended to increase in recent years, most notably because salaries for high-skilled jobs have risen, leaving middle and lower

salaries behind.⁶⁴ Very wealthy households have emerged as highly skilled women with higher earnings have entered the workforce. Households with two high-earning couples have multiplied (high-earning women tend to marry high-earning men). This widens the gap between rich and poor, especially given the rising number of single-parent households, where poverty is more frequent.

The widening of the income (and wealth) gaps between individuals is not exclusive to developed economies. Deepening inequality is already highly visible and spreading in different parts of the developing world, particularly in Brazil, Russia, India and China (the BRIC countries). Although increased inequality will not spread systematically or uniformly, three interconnected global trends are likely to assert themselves over the next two decades: an absolute increase in the income gap, the consequent intensification of poverty at one end of the social scale, and the multiplication of the so-called 'hyper-rich.'

The hyper-rich phenomenon exists at the other extreme of the problem of intensifying socio-economic inequality. It will tend to be most acute in countries with higher levels of economic growth, insufficient mechanisms to fight corruption, clientelist political systems, and oligarchic or monopolised markets – as is the case in Russia, India and China. The ability of oligarchic entities to exert control is directly influenced by levels of corruption. This is likely to remain a major problem in many of these countries by 2030 – despite growing public awareness and protest.

Social challenges in advanced economies

In OECD countries, almost six times as many jobless families are below the poverty line than working families. The ability of advanced economies to provide jobs to fight poverty and inequality will be crucial in the aftermath of the 2008 crisis and will depend on both economic and political conditions.

The salaries of low-skilled workers in the developed world have been subjected to downward pressure in recent decades by advances in technology and the growth of large emerging markets as low-cost production centres. In countries with high levels of structural unemployment in Europe, the low-skilled are the most vulnerable given the move towards the creation of knowledge societies. This pressure may ease as rising incomes in China reduce its labour competitiveness, but this could be partly offset by the rise of India as the next manufacturing powerhouse. Prospects for India's manufacturing industry are not very promising; nor are they bright for other developing economies in Africa, Latin America and Central Asia, which are less endowed with labour. This means

64. OECD, *Growing Unequal? Income Distribution and Poverty in OECD Countries* (Paris: OECD Publishing, 2008), p. 17.

relative global prices for manufactured goods might increase again in the period leading up to 2030. The potential wage gains for low-skilled jobs arising with reduced Chinese competition may therefore be offset partly by increases in the cost of living as goods increase in price.

Greater poverty among the aged could be a consequence of low employment and growth and related career instability.⁶⁵ In Europe, welfare states providing classic pay-as-you-go pensions, and/or encouraging private savings have been unable to respond to the plight of the many long-term unemployed, to the growth in part-time jobs, and to the often precarious professional status of many who find it difficult to gain a firm foothold in dual labour markets, which are characterised by scarce permanent jobs and highly flexible short-term and other contracts.

The economies strongly affected by the burst of housing bubbles in 2007-2008, notably the US, the UK, Ireland and Spain have, along with Greece, experienced the most dramatic rises in unemployment in the OECD. There have also been very sharp rises in unemployment in Hungary, Denmark, Portugal, New Zealand and Slovakia. Low-skilled workers are usually the poorest and the most vulnerable to layoffs in times of recession. In countries with high labour market duality, young people often bear the brunt of ‘adjustment’ during a recession as they are more exposed than the rest of the population to unemployment.

The current recession could have long-lasting damaging effects on advanced country middle classes. In 2010, 46.2 million Americans were living below the poverty line, up from 43.6 million in 2009 – the fourth consecutive annual increase in the number of people in poverty in the US, signalling a shock to its middle classes.⁶⁶ Spain, Portugal and Greece, which already had among the highest shares of population at risk of poverty before the crisis, are the most likely to see a new layer of poor added to the old layer, and to remain stuck there.⁶⁷ If low economic growth and high levels of unemployment prevail in the coming years, the structure of Western societies is likely to change deeply over the next two decades, with a *déclassé* middle class posing significant political challenges.

65. OECD, *Pensions at a Glance 2011: Retirement-Income Systems in OECD and G20 Countries* (Paris: OECD Publishing, 2011), p. 9.

66. C. De Navas-Walt, B. D. Proctor and J. C. Smith, *Income, Poverty, and Health Insurance Coverage in the United States: 2009*, US Census Bureau, Current Population Reports. Washington D.C.: US Government Printing Office, 2010, p. 14.

67. A. B. Atkinson and E. Marlier, *Income and Living Conditions in Europe*. (Luxemburg: Eurostat, Publications Office of the European Union, 2010), p. 107.

5. Climate change and scarcities: the challenges to human development

Though the gravest consequences of climate change are likely to be felt after 2030, it will affect living standards and food security by exacerbating water and food scarcity long before then, although its impact will vary significantly from region to region, depending in part on measures adopted to curtail global warming. Sea levels are expected to rise and there will be reduced access to safe drinking water and an expansion of drought-affected areas. Over one billion people currently rely on glacier melt water, which will eventually disappear;⁶⁸ those living in floodplains and coastal regions will experience increased risk of flooding. There is likely to be an increase in desertification of semi-arid areas. Regional warming and drying will reduce wetland surfaces, and large swathes of swamp will become meadow wetland. There will be reduced access to safe and reliable water supply; posing major challenges for agriculture and food security on all continents.⁶⁹ Increased risks to hydroelectric power generation will mean higher prices.⁷⁰ Between 90 and 200 million more people will likely be at greater risk of malaria and other vector- and water-borne diseases, with increased rates of diarrhoeal disease and malnutrition in low-income countries.⁷¹

The non-linear nature of projected climate change means that the true sensitivity of the climate remains unknown. ‘Tipping points’ could be reached with little warning and could result in rapid changes to regional and global climates. Such events could have dramatic consequences – from the collapse of the Greenland ice sheet leading to quickly and globally rising sea levels, to the disappearance of the Indian summer monsoon, massively degrading food production. The impacts of climate change and the resulting consequences vary across regions and latitudes. For example, an increase in temperature of two degrees centigrade could make parts of the Northern hemisphere agriculturally more viable, while in South Asia and Latin America this increase means a significant deterioration of food production.

68. European Environment Agency, *Vulnerability and Adaptation to Climate Change in Europe*. EEA Report No. 7/2005.

69. J. Shellhuber (ed.), *Proceedings from the 2005 Met Office Exeter Conference on Dangerous Climate Change*, 1-3 February, 2005.

70. WWF, *Going, Going, Gone! Climate Change & Global Glacier Decline*. WWF International, 2005.

71. W. Hare, *Assessment of Knowledge on Impacts of Climate Change* (Potsdam: Potsdam Institute for Climate Impact Research, 2003); R.S. Kovats and A. Haines, ‘Global Climate Change and Health: Recent Findings and Future Steps’, *Canadian Medical Association Journal* no. 172, 2005, pp. 501-2.

Glacial melting may lead to serious water disputes. In particular, the effects of reduced Himalayan melting from smaller glaciers will be felt across a number of countries, including India, Pakistan, Afghanistan, Burma/Myanmar, Bangladesh, Nepal, Bhutan and China. This could undermine the already fragile *status quo* among these states. Extreme weather and floods will affect the economic viability of many regions. Increasing sea levels and recurring floods could lead to a large-scale displacement of populations from small island states like the Maldives and Tuvalu and flood-prone nations such as Bangladesh.

Climate change and scarcity

Climate-related risks, combined with socio-economic pressures generated by rapid industrialisation, urbanisation and shifting global economic power, have added another layer of uncertainty to national policy planning. The anticipated bottlenecks and constraints (in energy, water and other critical natural resources and in infrastructures) – together with these socio-economic shifts – will result in new instabilities that will be difficult to manage.

Anticipated climate change could also have significant impacts on global fisheries resources, not least through disruptions of the food chain. Around 80 percent of global fish stocks are already over- or fully exploited.⁷² Seafood species may disappear by 2048 as a result of overfishing, pollution, habitat loss, and climate change unless action is taken to reverse the current trend.⁷³ Many of the fisheries most vulnerable to climate change are found in Africa, where conditions combine high exposure to climate change hazards with high dependence on fisheries resources and low adaptive capacities.⁷⁴

The World Bank estimates that by 2025 climate change will result in 1.4 billion people across 36 countries facing crop or water scarcities (600 million people in 21 countries are currently affected by this). The effects of climate change in North Africa are likely to worsen existing water and food scarcities, already unstable economies, and deteriorating urban infrastructure and socio-political systems, leading to increased economic migration pressures. These problems are likely multiply with climate change, but according to the UN its gravest consequences will probably be felt only after 2030.

72. FAO, *The State of World Fisheries and Aquaculture 2008* (Rome: FAO, 2009).

73. B. Worm et al, 'Impacts of Biodiversity Loss on Ocean Ecosystem Services', *Science*, vol. 5800, no. 314, 2006, pp. 787-90.

74. E. H. Allison et al, *Effects of Climate Change on the Sustainability of Capture and Enhancement Fisheries Important to the Poor*, DFID Fisheries Management Science Programme Project R4778J (London: Department for International Development, 2006).

The impact of climate change on health

The impact of climate change on water and global public health issues may become more visible. Even if the average global temperature rise is limited to two degrees centigrade over pre-industrial levels, there will be reduced access to safe and reliable water supplies, posing major challenges for agriculture and food security on all continents by the end of the century. Increased risks to hydroelectric power generation will mean higher prices. Climate change-induced modifications to water will have both direct and indirect effects on human health. Direct effects include death and injury from extreme weather events such as floods and storms. Indirect effects include increased risk of malnutrition due to drought and impaired or failed agriculture, magnified in some instances by failed local fisheries. The indirect effects of extreme weather events were demonstrated in 2011 in East Africa where, just two years after a major food security crisis, millions of people have been affected by droughts brought on by a prolonged failure of rains, causing crop losses, food shortages and severe hunger.⁷⁵ In some areas, emergency levels of malnutrition led to a major global appeal for food aid. Drought disrupts natural habitats and forces animals searching for water and food into closer contact with humans. The emergence of the Lassa and Hanta viruses in West Africa and North America, respectively, during periods of drought have led to outbreaks in humans with high mortality rates.⁷⁶

Water scarcity

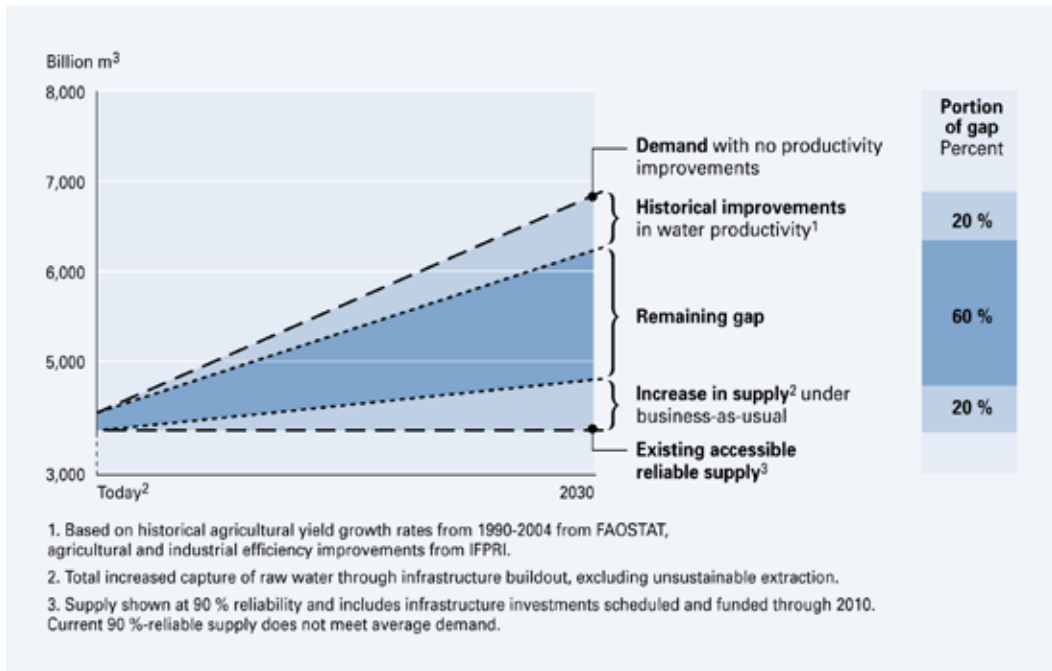
Water scarcity is likely to worsen significantly over the next two decades. While global water withdrawals have tripled in the last 50 years, the reliable supply of water has stayed relatively constant during the same period.⁷⁷ According to the scenarios of the 2030 Water Resources Group (WRG), current levels of demand for water at the global level already exceed sustainable supply, with unsustainable water withdrawals from non-renewable aquifers coupled with unreliable availability in many places. Water demand by 2030 could be as much as 40 percent greater than supply (see Figure 13). The supply gap varies by geography. It is most severe in developing countries and countries in transition.

75. UN Office for the Coordination of Humanitarian Affairs, 'Horn of Africa Crisis Report', 2009; FAO, 'FAO's Preparedness and Response to the Horn of Africa Drought 2011', August 2011.

76. K. Birmingham and G. Kenyon, 'Lassa Fever is Unheralded Problem in West Africa', *Nature Medicine*, vol. 878, no. 7, 2001, pp. 816-20.

77. UNESCO, *UN World Water Development Report: Water in a Changing World* (Paris: UNESCO, 2009), p. 101.

Figure 13: Projected demand for water by 2030⁷⁸



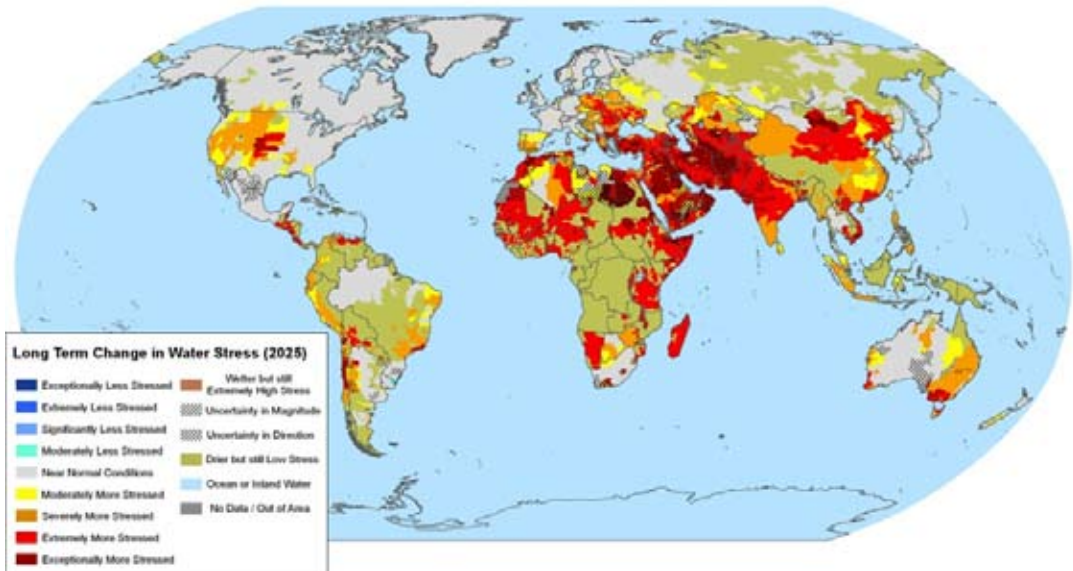
Source: 2030 WRG (2009: 7).

About 80 percent of the world’s population lives in areas with high levels of threat to water security (see Figure 14). By 2050, 75 percent of the global population could face freshwater shortages.⁷⁹ In the medium term, agriculture, which accounts for over 70 percent of human fresh water consumption, will likely suffer most, with consequences for food security. UNESCO has estimated that, under current agricultural conditions, water demand for agriculture will rise by 70-90 percent by 2050 in order to cater to the needs of the world’s population at that time.⁸⁰

78. The 2030 Water Resources Group Report, *Charting Our Water Future: Economic Frameworks to Inform Decision-Making of 2009*, describes how the annual rate of efficiency improvement in both industrial and agricultural water use between 1990 and 2004 was approximately 1%. Sustaining this rate of efficiency improvement to 2030 would address only 20% of the supply-demand gap. Business-as-usual supply expansion, assuming constraints in infrastructure rather than in the raw resource, will address only a further 20%. However, there are solutions which are not prohibitively expensive, namely technical improvements increasing supply and improving water productivity and actively reducing withdrawals by changing the set of underlying economic activities. The report states that across the four regions studied, these solutions would require \$19 billion per annum in incremental capital investment by 2030 – just 0.06% of combined forecast GDP for 2030.

79. M. Hightower and S. A. Pierce, ‘The Energy Challenge’, *Nature*, vol. 452, no. 20, March 2008, pp. 285–6.

80. *UN World Water Development Report*, op. cit. in note 77.

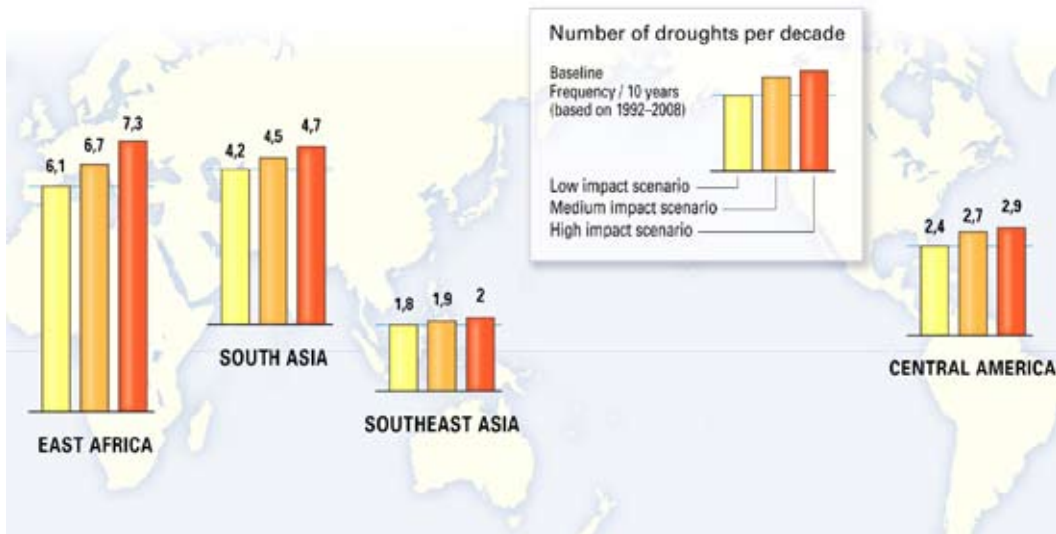
Figure 14: Long-term change in water stress 2025

Source: WRI (2011).

Some of the regions that are most at risk of water shortages are also globally important agricultural centres, including northwest India, north-eastern China, northeast Pakistan, California's Central Valley, and the mid-western United States. Figure 15 shows potential changes in four regions in which drought frequency is expected to increase, assuming a 0.2 degree Centigrade increase each decade from 2009 to 2030.⁸¹ This study predicts that drought frequency will increase most in East Africa, the driest region of the planet.

Energy is essential for obtaining potable water, and water is also a prerequisite for major sources of energy production. Hydropower, cooling of thermal power plants, fossil fuel production and processing, biomass production and the hydrogen economy are all dependent on a ready supply of water. Energy production accounts for approximately 39 percent of all water withdrawals in the US and 31 percent in the EU.

81. M. Webster et al, *The Humanitarian Costs of Climate Change*, Feinstein International Centre, December 2008: 16, at http://www.unisdr.org/files/8058_FeinsteinTuftsclimatechange.pdf.

Figure 15: Estimated drought frequency in 2030

Source: Webster et al. (2008: 16).

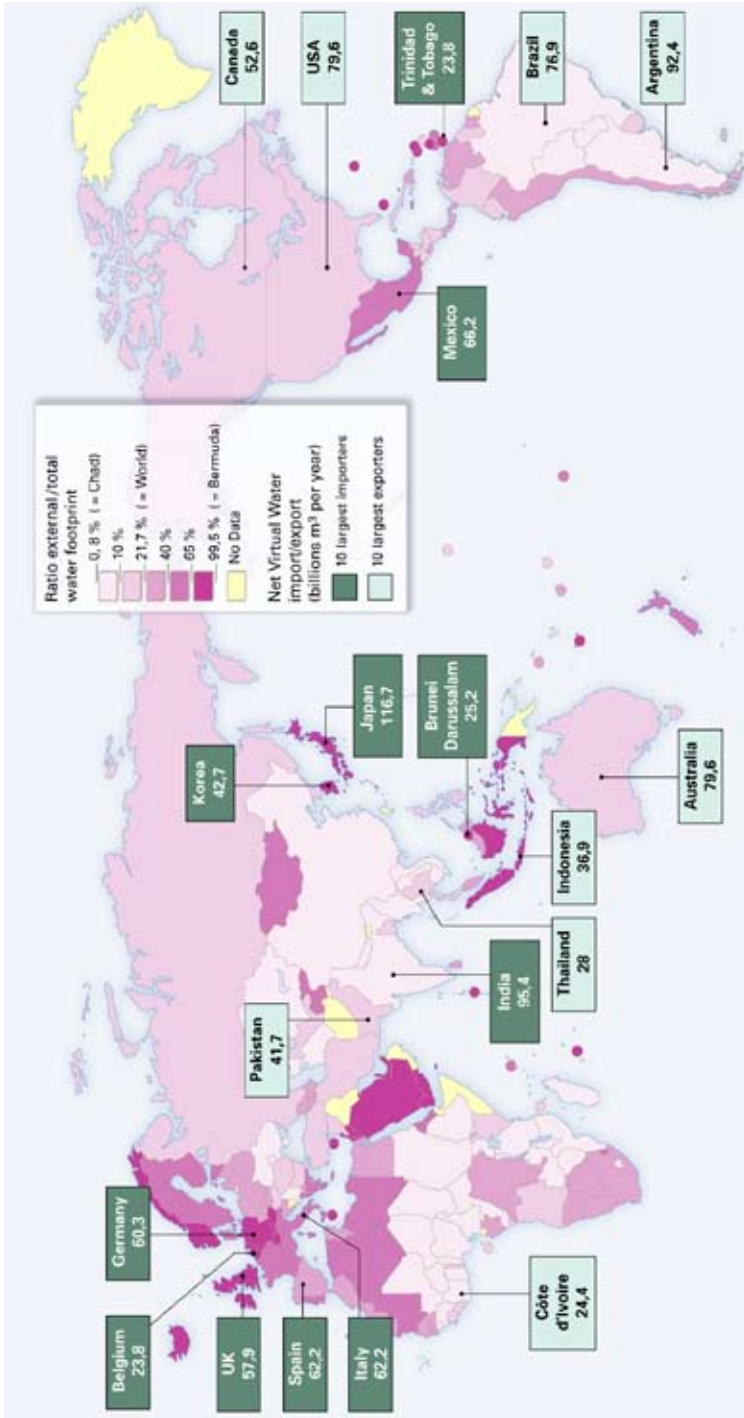
While energy production is forecast to grow by approximately 40 percent over the next two decades, water consumption by the energy sector is set to more than double over the same period. The effects of water stress will be felt most directly in the hydropower sector but it will also affect nuclear and thermal power stations that rely on water coolant systems, and a wide range of manufacturing industries. Water availability will be a critical determinant for decisions on where to invest and produce. Contamination of underground and surface fresh water supplies as a result of energy generation worsens this impact. Moreover, in order to obtain fresh water it is essential to have the energy to extract it from underground aquifers; to transport, manage and treat it for reuse; and to desalinate brackish and sea water to provide new potable water supplies.

The threat of water and food scarcity will vary geographically, and responses to the threat will also vary. Changing patterns of trade in agricultural and industrial goods that require water intensive production can help countries cope with localised scarcities. Using production and trade data, UNESCO has calculated how much ‘virtual water’ is traded around the world.⁸² A country’s volume of virtual water export includes all the domestic

82. M.M. Mekonnen and A.Y. Hoekstra, ‘National Water Footprint Accounts: The Green, Blue and Grey Water Footprint of Production and Consumption’, *Value of Water Research Report Series 50* (Delft: UNESCO-IHE Institute for Water Education, May 2011).

water resources used (evaporated, incorporated or polluted) to create products that are exported to other nations. UNESCO calculates that about one fifth of the global water footprint relates to production for export. Of this fifth, crop products contribute 76 percent while trade in animal and industrial products contribute 12 percent each. Figure 16 maps the relationship between the external and total water footprints of countries around the world. Chad, for example, is too poor to import anything and therefore has almost no external water footprint. In the coming decades, increasing wealth in much of the developing world will likely allow more and more countries to adapt their production and trade systems to respond to local scarcities.

Figure 16: Water footprints and trade



Source: Mekonnen & Hoekstra (2011).

Natural resource scarcity: energy

Progress in mitigating climate change remains highly dependent upon the implementation of recent governmental policy commitments and future actions, including support for the development of alternative sustainable energy sources and clean technologies. Nuclear energy, which was beginning to enjoy a renaissance as a major alternative to fossil fuels for the first time since the accident at Chernobyl in 1986, has come under renewed scrutiny following the destruction of the nuclear plant of Fukushima by an earthquake-triggered tsunami, and will not see a major expansion.

Fossil fuels will continue to dominate the energy mix in 2030, accounting for 80 percent of global energy supply. Fossil fuel reserves are finite, but reserve projections have proven very difficult in the past as patterns of use change and new reserves are discovered (see Figure 17 for one projection). Current global reserve-to-production ratios are estimated at 40 to 50 years for oil, about 60 years for natural gas, and about 150 years for coal.⁸³ In 1990, these ratios were approximately 43 years for oil, 60 years for natural gas and 205 years for coal.⁸⁴ Unconventional sources of oil (including oil shale and tar sands) and gas (including shale gas and coal gas), and the extent to which they can be developed, may extend the life span of fossil fuel reserves by several decades. World production of unconventional liquid fuels could account for 12 percent of total world liquids supply in 2035.⁸⁵ However, their development remains uncertain due to geological constraints, high extraction costs, and uncertainty regarding the environmental impact of production. In addition, it would have a major geopolitical effect as current producing countries could lose significant market share, with political and economic ramifications.

Energy scarcities may lead to international conflicts and realignments, and more strategic alliances to establish regional energy deals. The growing scarcity of conventional fossil fuel resources coupled with the potential emergence of unconventional resources may lead to a resurgence of resource nationalism, whereby supplier countries are tempted to maximise their political and economic advantages *vis-à-vis* dependent states.

83. International Energy Agency, *World Energy Outlook 2011*, Chapters 3, 5 and 6, OECD/IEA, 2011; BP, *Statistical Review of World Energy*, June 2011, pp. 6, 20 and 30, at <http://www.bp.com/sectionbodycopy.do?categoryId=7500&contentId=7068481>.

84. *Ibid.*, pp. 6, 20 and 30.

85. US Energy Information Administration, *International Energy Outlook 2010*, US Department of Energy, July 2010, p. 2, at <http://www.eia.gov/oiaf/archive/ieo10/index.html>.

Figure 17: Distribution of proved reserves



Source: BP (2011b: 7).

Political and physical threats to energy supply will persist in the medium term. There may be supply cuts for political and economic reasons (the Ukraine-Russia gas crisis in 2008-2009 is a case in point, which affected supplies to eighteen European countries). In this context, unstable and conflict-prone relations between supplier, transit and consumer countries in the EU’s Eastern Neighbourhood and the Caspian/Central Asian region will continue to pose problems for European energy security over the next 20 years. The wider Caspian and Black Sea region is likely to remain a source of tensions because of the unresolved legal status of the Caspian Sea, the persistence of conflicts in the region, and strained relations between Russia and neighbouring states.

Threats to energy supply together with environmental change – be it extreme weather events, water shortages, or changing sea levels and melting glaciers – will continue to pose a serious threat to critical infrastructure and global production and delivery systems. Global energy trade depends on a handful of dense shipping lanes. Based on density, the regions with the most vulnerable energy infrastructure include the east coast of North America, Europe, Northern Asia (mostly the territory of the former Soviet Union), Southeast Asia, Japan, and the key Middle Eastern fossil fuel producers. Other disrupt-

tions to energy supply may result from reduced access to water and adverse weather conditions, as occurred in the winter of 2010 in the UK, where over 100 businesses had their gas supply cut off. In the Gulf, gas shortages in recent years have been compounded by under-pricing and heavy demand from the petro-chemical industry.

Other resource scarcities

Mounting prosperity in both the developed and the developing world will likely continue to drive increased consumer demand for key resources. Rare earth metals (REMs), for example, have unique properties that make them indispensable in a wide variety of applications including clean energy and defence technologies. China is the dominant country in rare earth production, with 97 percent of the world's current production, almost 100 percent of the associated metal production, and 80 percent of the rare earth magnets.⁸⁶ China's accelerating consumption of its own rare earth resources and limitations on exports has left the rest of the world searching for alternative sources. It is anticipated that within the next five to ten years the growth of China's domestic consumption will be such that it will have no capacity for exports. Despite its dominance in production, China holds only 36 percent of global reserves.⁸⁷ Now that China is beginning to experience constraints in terms of production volume and environmental damage, other producers are likely to re-emerge.

Delivering the Green Industrial Revolution

In response to the climate challenge, governments have become more willing to finance R&D in clean energy and efficiency-related technologies. But the impact that this will have in significantly reducing climate change is likely to be insufficient. Looking forward to 2030, the pace of change remains uncertain due to the wide range of possible technology and policy scenarios. Making significant progress in reducing the impact of climate change will require immediately scaling up the deployment of existing clean technologies and significant increases in energy efficiency. The transformation of energy systems to address climate change concerns may be described as the 'third industrial revolution,' implying major changes in global production, especially the energy sector: from production and distribution to use and storage.⁸⁸

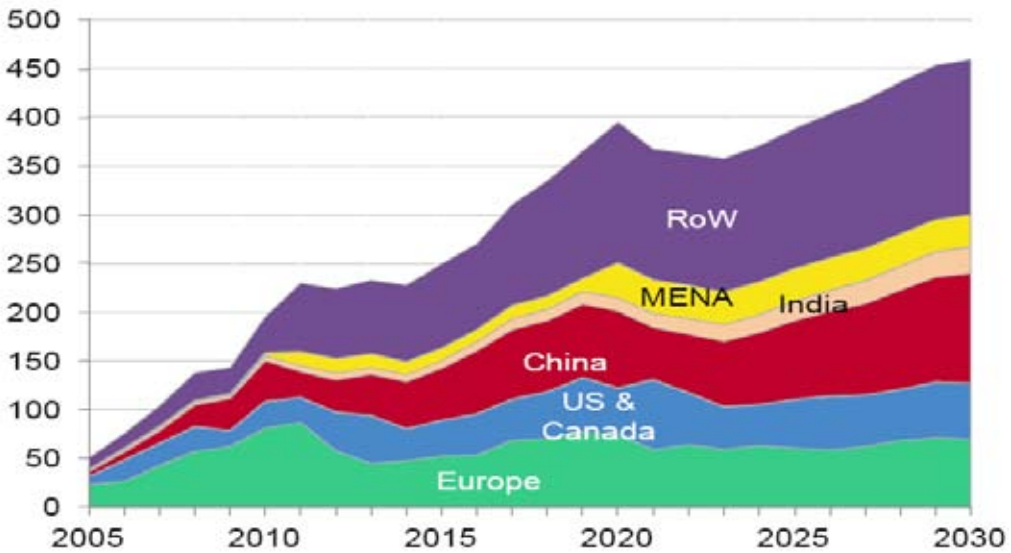
86. US Congress, *House of Representatives, Committee on Science and Technology, Subcommittee on Investigations and Oversight. Hearing on 'Rare Earth Minerals and 21st century industry.* 111th Congress, 2nd session, written testimony of Mark A. Smith, Molybcorp Minerals, Washington, GPO, 16 March 2010, p. 48.

87. US Geological Survey, *Mineral Commodity Summaries 2010*, U.S. Department of the Interior, US GPO, Washington, January 2010: 129, at: <http://minerals.usgs.gov/minerals/pubs/mcs/2010/mcs2010.pdf>.

88. J. Rifkin, *The Third Industrial Revolution: How Lateral Power is Transforming Energy, the Economy, and the World* (Oxford: Palgrave Macmillan, 2011).

New technologies and materials will need to be developed or scaled up to meet the challenge. Renewable energy has begun to make up a significant portion of new power sector investment (see Figures 18 and 19 and Table 2 for the projected evolution of renewables). In 2008, nearly one quarter of all investment in new generation technologies was in renewable energy (excluding large hydropower) – a fourfold increase since 2003. In Europe, a €13 billion investment was made in wind energy in 2009; in that year, wind power alone accounted for the largest proportion (39 percent) of new installations, and renewable power of all kinds for 61 percent of new installations. As the EU power sector continues to move away from coal, fuel oil and nuclear energy, associated technologies are being decommissioned.⁸⁹ The ongoing backlash against nuclear power will add to the difficulty of meeting emission targets through changed energy systems.

Figure 18: Value of renewable energy capacity installed, by region (\$bn)



Source: Bloomberg New Energy Finance (2011).

It is necessary to diversify energy sources and develop new clean technologies. The process underpinning this third industrial revolution has begun, but not quickly enough to limit global warming to only two degrees centigrade by 2100. Over 70 countries have renewable energy policy targets, but it remains unclear whether there is sufficient policy pressure for large-scale renewable investment. Since renewable energy market activity remains

89. European Wind Energy Association, *Wind in Powers: 2009 European Statistics*, February 2010, at http://www.ewea.org/fileadmin/ewea_documents/documents/statistics/100401_General_Stats_2009.pdf

predominantly policy-driven, lack of confidence in the binding nature and the delivery of renewable energy targets or incentive mechanisms may hamper the growth of the sector. The economic downturn has also had a negative impact on the development of clean technologies by dampening energy demand, which delays investment in new technologies, and limiting capital availability.

On the innovation front, the outlook is mixed. There has been impressive growth in the number of clean energy patents but inventions in the energy sector have generally taken two to three decades to reach the mass market. There is a significant mismatch between the urgency of climate challenges and the time taken for technology systems to provide a return on investment.⁹⁰ Much has been made of the growth in innovation capacities in Brazil, China and India, but they are expanding from a low base and have no leading global companies driving technological advancement. In the coming decade, companies and institutions in OECD economies will determine the speed of diffusion of the most advanced energy technologies. Across many sectors, the US, Japan and Germany are clearly leaders in energy innovation, though emerging economies are catching up. Innovation cooperation is primarily a national, not an international, activity. Facilitating cross-border innovation activities should be a policy priority.

In the near term, much of the relevant R&D for clean technology will occur in the developed world and emerging economies. Transferring technological knowledge to developing countries will require additional actions at an international level. The development of energy resources also comes with material, environmental and security risks. These risks include resource availability, access to materials needed to manufacture or to exploit new energy sources, and the use of equipment, materials or fuels for military means – the dual-use capabilities.

As energy technologies mature, companies and countries with strengths in ICT will capitalise on growth opportunities that emerge as technology systems evolve in a low carbon economy.⁹¹ However, smarter energy systems also generate new risks, including those posed by cyber-security and the cascade effects of interconnected systems. For smaller businesses or new entrants, access to technology will be critical to securing financial support. Companies may use patents to deter the entry of competitors and shape the industry into an oligopoly able to charge prices somewhat above marginal costs and thus to support research.⁹²

90. B. Lee et al, *Who Owns our Low Carbon Future? Energy Technologies and Intellectual Property*, Chatham House Report, September 2010, at http://www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/r0909_lowcarbonfuture.pdf.

91. *Ibid.*

92. See, for example, J. Barton, 'Antitrust Treatment of Oligopolies with Mutually Blocking Patent Portfolios', *Antitrust Law Journal*, vol. 69, no. 3, 2002, pp. 851-882.

R&D spending and the profile of global businesses in the energy sector will come under increasing public scrutiny, especially if R&D activities are supported by the public sector.⁹³ There is a need to create a framework to provide guidance regarding parameters of success, as well as the balance between private interests and public goods delivery.

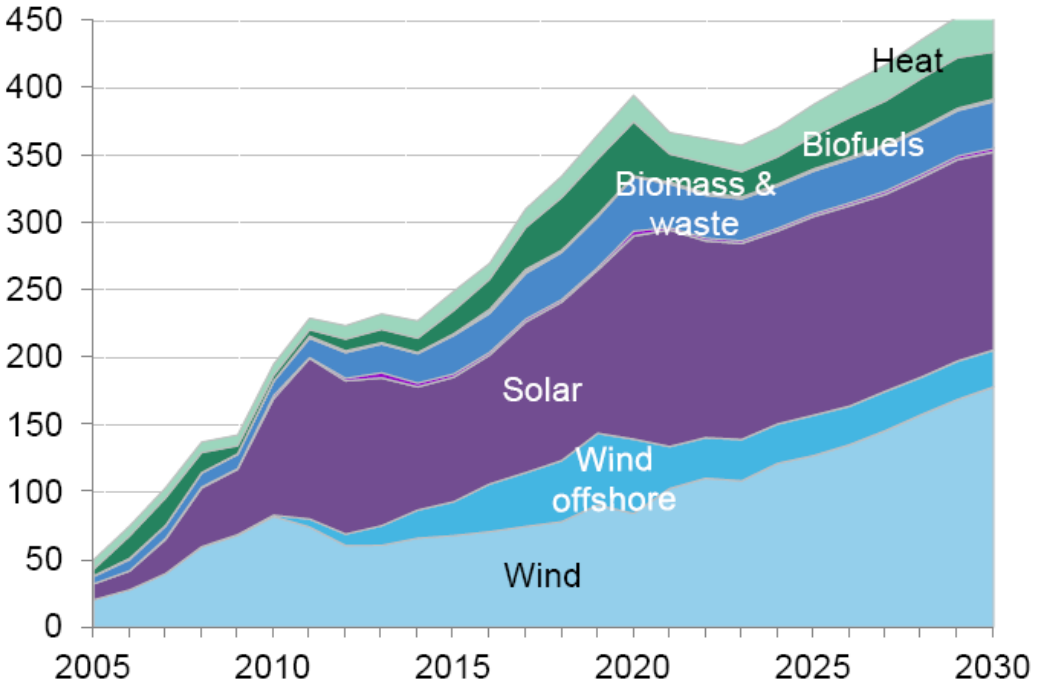
Table 2: 2030 target investment budgets for renewable energy technologies

World Region	Annual investment per capita in 2030 (€ 2006)		Total investment budgets in 2030 (billion € 2006)	
	Low Variant	High Variant	Low Variant	High Variant
OECD Europe	111	223	60	121
OECD North America	110	220	59	118
OECD Pacific	112	224	22	44
Transition Economies	91	180	31	60
China	102	204	149	299
East Asia	41	81	33	66
South Asia	35	71	73	147
Latin America	46	91	26	52
Africa	20	41	30	59
Middle East	101	202	28	55
Global	62	124	510	1 021

Source: EWG (2008).

93. A. Rau et al, 'Can Technology Really Save Us from Climate Change?', *Harvard Business Review*, January-February, 2010.

Figure 19: Value of renewable energy capacity installed, by technology (\$bn)



Source: Bloomberg New Energy Finance (2011).



6. Human security: protecting citizens

State security will remain a key issue in the period leading up to 2030, but it is not likely to remain the dominant topic on the international agenda. Interstate wars among great powers are highly unlikely, given their primary interest in preserving stability and continued growth to meet the needs and expectations of their citizenries. There may be a greater tendency to ‘securitise’ social and human issues, and internal security may become a key policy issue. This will generate domestic tensions that may divide societies and lead to crisis and violence. Nationalist politics based on policies of radical affirmation of identity or religion is likely to remain a major security challenge, possibly even leading to crimes against humanity. However, despite the likelihood of renewed nationalism, it is unlikely that the world will return to a bipolar heterogeneous ideological system.

The main strategic aims of China, India, Brazil and most middle powers will be a peaceful accumulation of power and economic development. The exception may be Russia, if nationalistic trends prevail. Given the lessons it has learned from the Iraq war and Afghanistan, the US will be reluctant to engage in major military operations. In Europe, budgetary cuts and opposition to military intervention, particularly in Germany, are likely to place severe constraints on interventions, even those undertaken for humanitarian reasons. There is likely to be an ongoing debate on how to adapt existing resources and capabilities to address new patterns of conflict.

The new powers will tend to develop diplomatic skills and to adopt initiatives to settle conflicts before they get out of hand, and it is unlikely that existing tensions will trigger major inter-state wars. It is also unlikely that any of the established powers will be willing to disrupt the international order over the coming decades. The near universal spread of human rights ideals is gradually delegitimising the use of force as a means of pursuing the national interest: transnational non-state actors actively promoting peaceful solutions to crises are likely to proliferate, and anti-war public sentiment is likely to increase across the globe. The quasi-global condemnation of the decision to go to war in Iraq in 2003 illustrates that trend.

But the possibility of inter-state conflict cannot be discounted entirely. The spill-over effects of key conflicts may be a source of regional instability. Examples include the China-Vietnam conflict over the disputed islands in the South China Sea; the Indian-Pakistani conflict over Afghanistan; the conflict between Algeria and Morocco over the Western

Sahara; the problems emerging as a result of the possible collapse of North Korea; and unresolved conflicts in Eastern Europe.

Tensions over raw materials may also cause conflict and require new forms of crisis management. Border tensions, particularly in Asia, could also trigger serious inter-state conflict if the necessary measures are not taken to address underlying causes. Looking ahead to 2030, the border tensions between China and India over water resources in particular have the greatest potential to disrupt international peace.

Major conflict trends

The focus of long-term strategic planning is on global challenges such as weapons proliferation or instability caused by failing states, humanitarian crises, piracy and organised crime. Conflicts will be generated by the trend towards the dissolution of state power and the rise of nationalism and extremist identity politics, which may in some cases lead to crimes against humanity.

Nationalism and identity politics

The likelihood of civil wars is high. Wars fuelled by nationalism and extremist identity politics with major humanitarian repercussions will be the central security challenge in the decades to come. Criminal networks and populist nationalist movements will further contribute to state fragility. Terrorism will remain a concern, but low-intensity conflicts such as urban violence will require the increasing attention of governments. Internal tensions may lead to sub-national autonomy and internal secessionism in federal states, mostly within existing borders (although a few new small countries may be created).

Because of these trends there will be a growing risk of mass violence and humanitarian crises; in some cases, there may be international military intervention to prevent them. Humanitarian emergencies triggered by water and food scarcity may combine with failing state situations to generate major humanitarian crises. The crises of 2011 in the Horn of Africa, which affected more than 12 million people, are a harbinger of crises to come. Human security, involving the protection of citizens from mass violence, is likely to become the major driver of security policies.⁹⁴ This has already been the case since the end of the Cold War, from the Balkans, East Timor and the Sudan to Libya.

94. S.D. Beebe and M. Kaldor, *The Ultimate Weapon is No Weapon: Human Security and the New Rules of War and Peace* (New York: Perseus Books, 2010). Kaldor and Beebe argue that there has been a shift away from conventional wars waged by uniformed personnel fighting on battlefields over territory towards new wars involving non-state actors, with much of the violence directed against civilians. These conflicts, and their accompanying focus on human security, has thus become central to policy-creation and will need to be addressed through a more mature approach that involves constructive civilian components more than military action.

Non-state violence

Over the past few years, the number of armed conflicts and direct casualties caused by such conflicts has declined steadily. By contrast, armed violence is on the rise. The OECD estimates that approximately 740,000 people die annually as a result of armed violence (including crime and interpersonal violence).⁹⁵ Armed violence ranks among the top five causes of death for adults. Over 490,000 (66.2 percent) of these fatalities occur in societies that are not affected by war. Fewer than 55,000 (7.4 percent) victims are direct casualties of war.

Organised crime and criminal urban violence by non-state actors will increase, particularly in megacities, given the increasing urbanisation of the global population, but also growing transnational criminality, and the growing proportion of young people in developing societies who are directly affected by high levels of unemployment, lack of education and underpaid labour. This is most likely to affect high-growth countries such as Brazil and some Asian states. The current war between government forces and drugs cartels in Mexico is a clear example of this.

State fragility and armed conflict

Armed conflict disproportionately affects the poorest countries. Its costs can hold back development for generations. It is estimated that the average cost of seven years of civil conflict and a 14-year recovery period is approximately USD 64 billion.⁹⁶ Each year of violent civil conflict is estimated to cause a 2 percent annual loss of GDP growth.⁹⁷ Countries affected by internal armed violence may lose between 5 and 10 percent of GDP, thus perpetuating some of the factors contributing to internal insecurity and instability.

State fragility and conflict will be most pronounced in sub-Saharan Africa, where it is compounded by pervasive and possibly growing income inequality and a massive increase in the urban population. Social vulnerabilities increase the likelihood of conflict, and thus reinforce the 'state-fragility cycle.' Intra-African and trans-regional forced migrations due to economic factors, conflicts and environmental degradation will tend to grow for this reason.

95. OECD, *Armed Violence Reduction: Enabling Development* (Paris: OECD Publishing, 2009), p. 21.

96. P. Collier and A. Hoeffler, 'The Challenge of Reducing the Global Incidence of Civil War', *Copenhagen Consensus Challenge Paper*, 2004, p. 8, at www.copenhagenconsensus.com/Files/Filer/CC/Papers/Conflicts_230404.pdf. This includes USD 49 billion in military expenditures and economic losses, USD 10 billion in post-conflict effects, and USD 5 billion in healthcare costs.

97. Geneva Declaration Secretariat, *Global Burden of Armed Violence*, Small Arms Survey. Geneva, 2008, p. 89, at www.genevadeclaration.org/fileadmin/docs/Global-Burden-of-Armed-Violence-full-report.pdf.

Scarcity and strategic interests

Evolving security doctrines, including those in democratic societies, are taking into account the structural factors that contribute to tension and violence. Climate change will generate risks and uncertainties for the international order over the next two decades, in particular due to its impact on water and food scarcity, and because of the dramatic changes in patterns of human settlement that are likely to occur as a result of environmental degradation.

The energy challenge has become a major long-term political, economic, environmental and social concern worldwide, with states prioritising relations with oil and gas-producing countries when formulating their foreign and security policies. The challenge of security of energy supply tends to divide the international community into opposing blocs of consumer and supplier countries, with separate roles for transit countries. Control over a significant part of the world's energy supply is in the hands of authoritarian regimes, the priorities of which may not be free trade. Nationalists are likely to instrumentalise resources as a factor for popular mobilisation.

Military technology and future conflicts

A major conflagration involving chemical, biological, radiological or nuclear weapons (CBRN) is not expected in the near future. Paradoxically, however, the risk of exposure to such agents has increased and is likely to increase further because some states circumvent disarmament, arms control, and non-proliferation obligations, or deliberately eschew the relevant treaties. The emergence of non-state security actors – domestic or transnational terrorists and criminals – with major financial assets, access to relevant resources and scientific and technological know-how, also enhances the risk of CBRN incidents, whether through weapon development, targeted release against individuals or small entities, or sabotage of industrial installations and research facilities.

Furthermore, some conventional weapons are achieving the destructive potential of CBRN. While formal international control over their development and possession appears unlikely, some states will develop bilateral or regional instruments to enhance transparency, communicate intent, and reduce the instability and unpredictability that may arise from the deployment of such weapons. The same will apply to defence systems, particularly anti-missile systems. Both space and the deep sea are becoming arenas of increased economic and military activities, which could fuel new forms of rivalry and weapon accumulation. A major diplomatic challenge over the next two decades will be

upgrading or replacing existing obsolete treaties on the demilitarisation of areas that are considered shared human heritage sites.

New means of armed conflict: space wars?

Military operations conducted entirely in outer space remain a distant scenario, and may never materialise. However, in the unlikely event of a major war taking place during the next two decades, space will indeed be subject to militarisation as an extension of ground operations. Potential scenarios include the destruction of satellites that support intelligence-gathering global positioning communications and data transmission, or which act as force multipliers for ground troops. Some states will continue to focus on anti-satellite weaponry as a counter-measure, in addition to space-based assets, or on means of defence against attacks on their own capabilities – this could be the case of the EU countries. The US is considering the deployment of conventional attack platforms stationed in space or which will travel at high speed through space towards the intended target. However, space programmes will be subject to budgetary cuts in the years ahead, so this development is unlikely over the coming decade.

Cyber security: a growing trend

Cyber security is becoming an important component of the security priorities of states. Cyber attacks constitute an important new criminal activity that will be used increasingly in conflict-like situations, exploiting modern societies' growing reliance on information and communication. The tendency to see cyberspace as a new security frontier is clear in the US, which has already established a joint task force involving the National Security Agency (NSA) and the Department of Homeland Security (DHS).⁹⁸ In the coming decades there will be a trend towards the development of domestic and international criminal law to prevent and punish attacks or mitigate their consequences, and a trend to prevent the securitisation of a sector that is so fundamental for freedom of expression and connectivity.

Cyber-technology and warfare

It can be safely assumed that any traditional military operations will be accompanied increasingly by attempts to neutralise the enemy military ICT infrastructures and ca-

98. US White House Office of the Press Secretary, 'Fact Sheet: Cybersecurity Legislative Proposal', 12 May 2011, at <http://www.whitehouse.gov/the-press-office/2011/05/12/fact-sheet-cybersecurity-legislative-proposal>; US Department of Homeland Security, Memorandum of Agreement Between the Department of Homeland Security and the Department of Defence Regarding Cybersecurity, 13 October 2010, at <http://www.dhs.gov/xlibrary/assets/20101013-dod-dhs-cyber-moa.pdf>.

capacities to communicate with the local population. Such attacks range from the deliberate introduction of malware to sabotage installations (one example is the Stuxnet worm targeting the industrial software controlling Iran's nuclear reactors) to the phishing of critical government networks. Consequently, the establishment of a new competitive dynamic of offensive and defensive cyber capacities involving all kinds of actors is a likely development. In 2030, cyber capabilities may become the key weapon of the US airforce.⁹⁹ Future warfare has a major technological aspect, with the increased use of robots. Deploying machines in battle and avoiding human casualties (which are politically costly) may make it easier to decide to go to war.

Regional conflict trends

Asia

Asia is the region of the world where inter-state tension is highest. This is mainly because of major border disputes between China and India, and between China and Vietnam over the South China Sea islands, with a divided Korea in a permanent state of Cold War; because of the Kashmir question, which poisons Indo-Pakistan relations; and because of the Afghanistan war, which now seems likely to culminate in the resurgence of the Taliban in Kabul. These tensions may be exacerbated in the coming decades, as a consequence of social problems and rising nationalism, and could trigger a major armed conflict.

Latin America

Latin America appears to be the region in the world where wars seem most unlikely; however violence linked to drug trafficking will not disappear. Criminal groups, whether linked to former guerrilla factions or not, are major causes of conflict in Latin America. There is a trend towards the demise of old guerrilla groups, as is happening in Colombia, although some criminal networks in Central American countries may try to gain influence and control the state apparatus through corruption and violence.

Europe

In Europe, nationalism in the Balkans and in Cyprus could be mitigated by European integration, which should contribute to the search for peaceful solution of existing conflict, but the declining attractions of integration would have the opposite effect. By 2030

99. J.A. Shaud, 'An Air Force Strategic Vision for 2020-2030', *Strategic Studies Quarterly*, Spring 2011, pp. 12 and 17.

all states in the region are likely to be members of the Union. Were the prospect of EU membership to be removed, this would have extremely detrimental effects on various internal and border disputes in the region and in Bosnia-Herzegovina in particular. The division of Cyprus could be mitigated by greater convergence between Turkey and the EU, but the difficulties attending the process of enlargement to Turkey may persist and render the solution of the Cyprus question more problematic.

In South Caucasus the separation between the breakaway regions and the affected countries is deeply entrenched and may be very difficult to overcome. South Ossetia and Abkhazia are very likely to become increasingly integrated with Russian economic structures. Russia will not reverse its August 2008 decision to recognise the two entities as independent states, which undermines the search for a common solution with the EU and the US. Nagorno-Karabakh is a more complex conflict because it involves a number of regional actors. Russia has demonstrated greater willingness to find a solution to this problem, but the ever-increasing radicalisation of both sides shows the limits of efforts by external actors to push for conflict resolution. Deepening links between Armenia and Azerbaijan and the EU, and Armenian-Turkish reconciliation, could pave the way for a resolution of the conflict, although this may be difficult to achieve in the coming decade. A solution to the Nagorno-Karabakh conflict could have a hugely positive effect on the political and economic development in the Caucasus region.

The Southern Mediterranean

The coming decades may witness the end of some intractable conflicts in the Southern Mediterranean. The resolution of the conflict in Western Sahara will depend on real democratisation processes in Morocco and Algeria. The prospects are positive if the political reforms currently underway in Morocco translate into a true parliamentary democracy and are followed by similar reforms in Algeria. The Middle East is clearly the most intractable region of conflict in the vicinity of the EU. Current changes in Egypt and the Arab world may create new and more favourable conditions for Palestinian reconciliation and increase the pressure on Israel to accept a two-state solution. But this pressure is likely to have faded by 2030 if a two-state solution does not quickly follow. Divergent demographic trends in Israel and Palestine suggest that Jewish Israelis will be unlikely to support a one-state solution for fear of being outnumbered in their own state.

From almost 90 percent in 1960, the Jewish proportion of the Israeli population has been falling steadily, reaching 76 percent in 2009. Meanwhile, the annual rate of Jewish immigration to Israel has fallen after the post-USSR surge from 3 to 1.7 percent. Today,

the Arab and Jewish populations of Israel and Palestine are roughly the same. If one includes Palestinian refugees in neighbouring countries, the Palestinians would likely have a clear and growing majority, though the rate of growth of the Arab population is slowing. Indeed, while the Israeli-Arab rate of population growth has dropped from 3.6 to 2.8 percent over the last decade, the Israeli-Jewish population growth has remained relatively steady at around 1.7 percent per year. In sum, the Jewish fear of demographic swamping by Arabs is real, though the statistical case may become less lopsided as birth rates fall across the region.¹⁰⁰

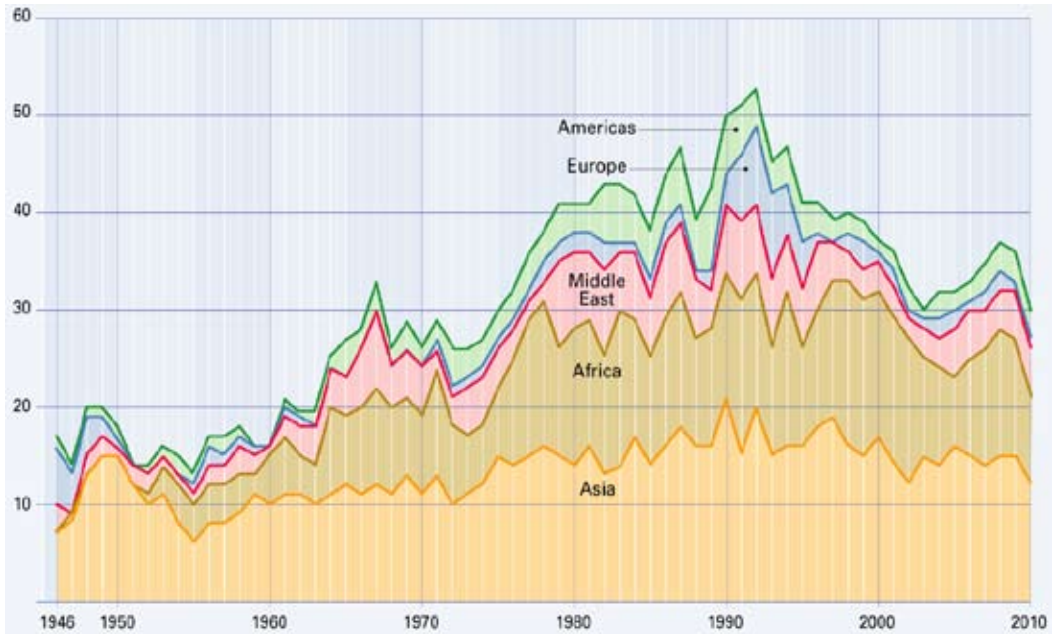
Other attempts to resolve the conflict could easily be derailed again. Two factors in particular could eventually overturn a peace process: the negative impact of the failure of attempts to democratise Syria and Egypt; and political developments in Israel and in the US favouring forces that could stand in the way of a peace deal.

Africa

Despite reductions in conflict in recent years, continued state fragility and post-colonial turbulence suggest that Africa is likely to remain conflict-prone (see Figure 20). Although progress with regional crisis management capacity-building warrants some optimism, it is unlikely that problems of fragility will be completely overcome by 2030; a best-case scenario is that they will have slowed down or been contained.

100. Central Bureau of Statistics (Israel), *Statistical Abstract of Israel 2009*; D. Levy, 'Same Netanyahu, Different Israel', *Foreign Affairs*, 24 May 2011; Y. Faitelson, 'The Politics of Palestinian Demography', *Middle East Quarterly*, Spring 2009; S. della Pergola, 'Demography in Israel/Palestine: Trends, Prospects, Policy Implications', *IUSSP XXIV General Population Conference*, 2001.

Figure 20: Conflict around the world, 1946-2010



Source: Uppsala University Peace and Conflict Research (2011).





Part III

**A polycentric world but
a growing governance gap**



7. A power shift to Asia but greater uncertainty

The international order will look dramatically different in the coming decades from what it has been over the past 20 years. Power will shift away from the Euro-Atlantic powerhouse, and there will be many players with no clear power centre. The United States will remain the largest military power in the world, and perhaps the world's main international actor, but its capacity to deal with major challenges will depend increasingly on its capacity to co-opt other states.

By 2030, the world will be polycentric: power will be more diffused among great and middle powers. US hegemony is very likely to wane and no single power is likely to replace it. The end of superpower hegemony is having a 'decompression effect,' giving all states of all dimensions greater freedom of manoeuvre in the international arena. This will create new opportunities for middle powers to play a greater role globally and at the regional level in particular.

The shift of power from the Atlantic to the Asia-Pacific region is very likely to be consolidated. In demographic and economic terms, China and India will have moved centre-stage, accounting for a projected 35 percent of the world population and 25 percent of world GDP by 2030.¹⁰¹ The twenty-first century could be the 'Asian century' provided that India and China shift from mutual suspicion and strategic competition to partnership. But this is unlikely to happen. Nonetheless, relations between these two Asian giants will be an increasingly important factor for peace and economic development in the future given their sheer size. If China and India do not converge, this will cause regional tensions which may make the US an indispensable actor in Asia's balance of power. It is likely that the US will continue to be perceived by India and other East Asian nations such as Japan as an indispensable counterpoint to Chinese power.

Despite the shift to Asia, the world will remain multipolar in 2030. But it will not be multipolar as originally anticipated by many analysts.¹⁰² Many nations are acquiring great power status; others may lose it; and yet others are shifting to middle or regional power status. Rather than the world being dominated by a handful of great powers, multipolarity will involve a greater plurality of actors. Given the higher degree of plural-

101. A. Maddison, op. cit. in note 42.

102. P. Kennedy, *The Rise and Fall of Great Powers* (New York: Vintage Books, 1987).

ism and interdependence in an ever-increasing number of spheres the consequences of action (or lack thereof) by middle power states in particular will have a significant effect on world affairs.

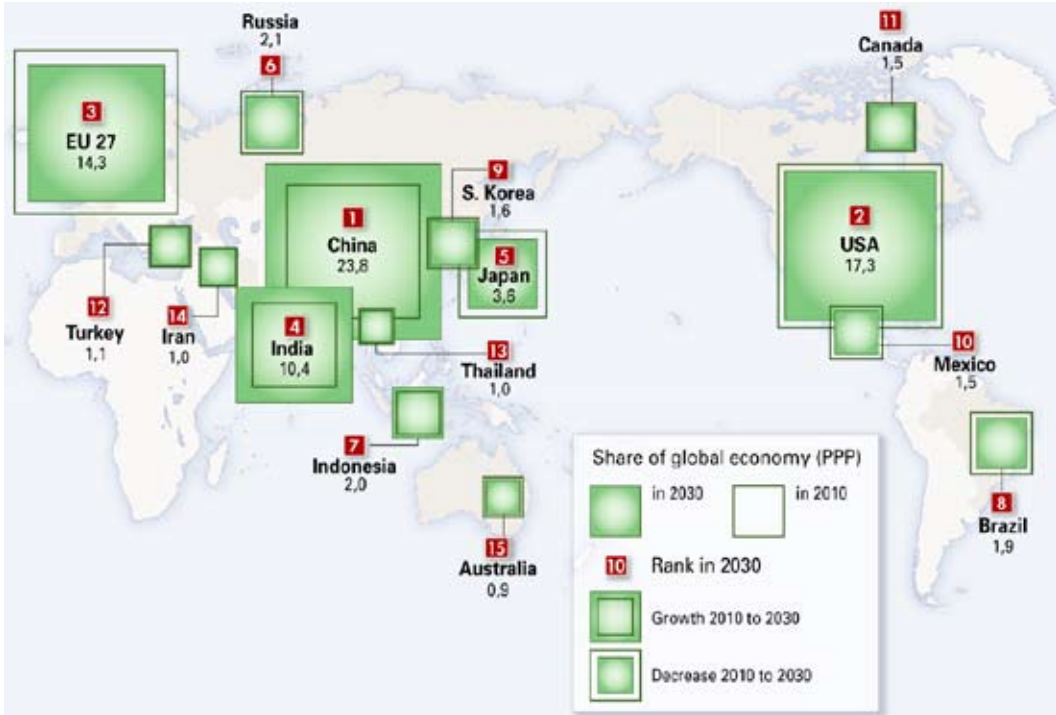
A world of diffuse power

The relative importance of different dimensions of power will change, as interdependence deepens and power flows away from established centres. In particular, military assets may well prove to be less relevant to achieve political goals than economic performance, particularly sustainable economic growth patterns.

The wealth of nations will be a decisive benchmark and factor of political influence at the global level. A critical question will be how growth translates into wealth. The wealth of nations is a function of their ability to sustain development and of indicators such as produced capital, natural resources and the value of human skills and capabilities (what is also called ‘social capital’). Charting GDP growth and *per capita* income or comparing purchasing power in different countries gives an incomplete picture of the wealth and says little about relative world influence. Social capital, starting with education and skills, is rarely taken into account. If knowledge and not just information is taken into account, deeper hierarchies will emerge between the regions, governments and businesses producing and controlling strategic knowledge and those that do not. Finally, the question of how global production chains are shared between the large economies – and whether Western global chains remain dominant or are replaced by Asian ones – will determine the distribution of competitive power

Political influence does not increase in tandem with growth nor does it depend solely on wealth and the size. Today, the EU is the wealthiest world power with the most advanced environmental policy but it was powerless to decisively influence the world climate summit in Copenhagen, or to play a pivotal role as a peace-broker in the Middle East. In addition to material wealth, military power (traditionally the primary dimension of state power) and soft power (the power of attraction of a given society in relation to others), and the capacity to forge a domestic consensus for a coherent foreign policy explain international status. In the case of the EU, the situation is more complex since foreign policy coherence also requires unity among states and supranational institutions.

Figure 21: The 15 largest economies in 2010 and 2030

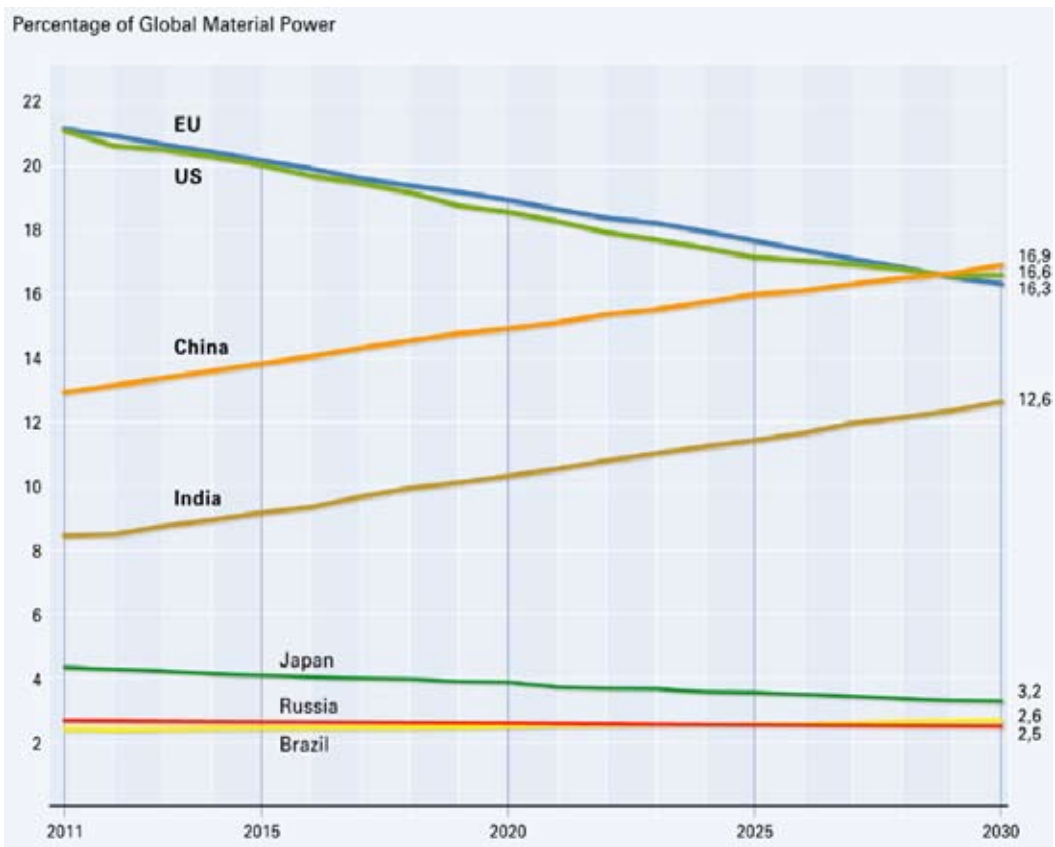


Sources: IMF World Economic Outlook database (estimates for 2010). For 2030 projections see Maddison (2007: 12).

It is expected that the spread of wealth to the most populous nations on the planet, notably in Asia, will consolidate the rise of new economic powers (see Figure 21 above). The accepted wisdom is that China will become the largest economy in the world, and it will probably overtake the United States (and the whole of the EU) around 2030, first in purchasing power parity (PPP) terms, and then in nominal USD terms. China, followed by India, will be the main cause in the overturning of global GDP rankings. However, the global GDP 'hierarchy' is likely to remain the same for the remaining economies. But this scenario is subject to important caveats.

The EU will remain among the top four global economies but, as with the US, its relative decline is the inevitable consequence of the rise of the other states with much larger populations, particularly in Asia. As Figure 22 shows, the EU is likely to shift from first to third largest economy in the world, in line with most conventional projections on the expected performance of large individual EU member states.

Figure 22: Material power index



Sources: *International Futures Forecasts with the Strategic Foresight Project of the Atlantic Council and the US National Intelligence Council. Data from Frederick S. Pardee Centre for International Futures.*

Soft power

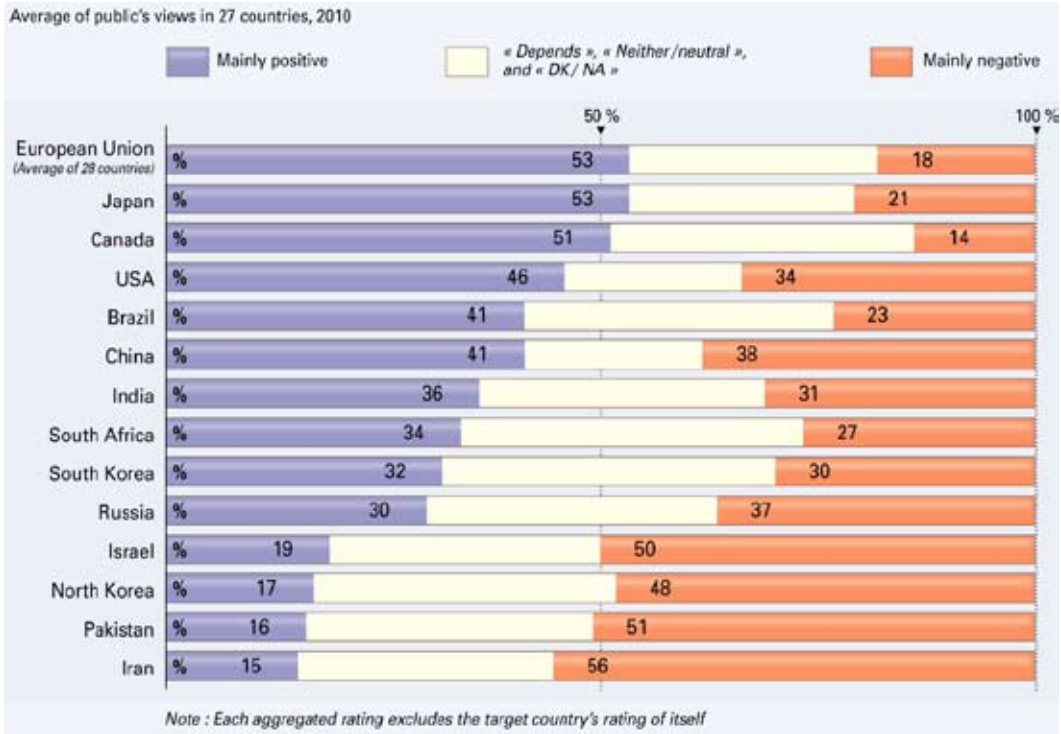
In the absence of a hegemonic global player, all states will need to cooperate to address challenges such as financial and economic crises, climate change and global security issues (the proliferation of weapons of mass destruction, for instance). In a world of diffuse power the capacity to co-opt others will be a decisive component of power.¹⁰³ Countries' ability to do so will depend in part on their soft power capabilities. With the development of a global information society, soft power will become more important and all international actors will attempt to strengthen theirs. States are also likely to work harder to co-opt non-state actors in this regard.

By itself soft power does not translate into political power (its absence is not politically crippling); it must be backed by powerful diplomacy. In the years ahead, if it is able to overcome isolationist tendencies, the US may remain the world's top soft power state and its attractiveness will be perceived both at the domestic and international levels.

Economic power may be central in determining the level of regional and global influence of states, but it is not crucial by itself. Analysts are finding new ways to measure other forms of power and influence, taking into account new variables that attempt to quantify soft power and political unity (see Figure 23, for instance). Perceptions of soft power attractions will shift over time. The US may have been more internationally attractive under Clinton than under the last Bush presidency, for instance; and Israel has great soft power potential but its policies toward Palestine are too unpopular for it to exploit that potential effectively. The EU states are currently those that exert the greatest soft power worldwide according to polls that measure the EU's attractiveness using data such as tourism, cultural outreach and human development. But the EU may continue to encounter difficulties transforming its soft power into concrete political gains.

103. See J.S. Nye, *The Future of Power* (New York: Perseus Books, 2011).

Figure 23: International public perceptions, a measure of soft power



Source: BBC World Service poll of 29,977 adults, GlobeScan/PIPA, April 2010.

The great powers

A comprehensive index that measures more subjective variables such as soft power, political unity and the multiplying effects of regional cooperation suggests that the great powers of 2030 are most likely to be the US, China, the EU, India and Brazil. However, for the EU to remain on the list, its member states must join forces (and unite voices) effectively and coherently.

The United States

Despite a relative decline in power, in 2030 the US is likely to remain the most influential power, although this will depend on its ability to overcome the present economic crisis and the blockages in its political system, and on its ability to take advantage of its scientific and technological leadership, a position it is also likely to maintain into 2030.

The US will very likely remain the major military power in 2030, although it will suffer a relative decline and become unable to sustain the present level of military expenditures (currently 4.8 percent of its GDP).¹⁰⁴ The US will be the only country with a global military outreach. However, it is likely that it will project military power primarily through broader coalitions, except where vital national interests are threatened or in response to a direct attack, in which case unilateral action is always an option. In partnership, the US could be the bedrock of political leadership and a key operational enabler for the engagement of other states.

Overall, the military power of the US is likely to be exercised within tighter political constraints and involve a targeted use of force, not least thanks to the technological edge that the US is expected to maintain. But its military power is not likely to be a decisive factor in resolving crises or conflicts. The denial capabilities of other states, including of the middle powers, may grow strong enough to allow them to deter US military action, unless vital national interests are threatened.

The growing influence of populist and anti-establishment movements over mainstream politics may significantly undermine America's soft power in future decades by constraining the political space of national leaders on the global stage. The successes of these movements in America will depend largely on how the US is able to deal with its economic problems, which are currently undermining social cohesion and feeding isolationist trends. In time, these trends may weaken US commitment to multilateralism, itself a basic component of its soft power and a key to successful international cooperation. But the US is also well placed to take full advantage of the newly emerging network society to build new forms of global governance.

The European Union

The future role of the EU as an international actor stands in the balance. The solution to the ongoing debt crisis, the pace and quality of future economic growth and the demographic prospects of the Union are among the key factors that will affect its international profile and its capacity to influence world affairs. The credibility, legitimacy and effectiveness of the Union will also depend on whether cohesion and solidarity between the citizens and member states grows or wanes. The Union is endowed with powerful assets to thrive in an interdependent and polycentric world, including great human capital, vibrant civil societies, world-class companies and, last but not least, a model of governance that reconciles national sovereignty with extensive fragmentation and a degree of political integration.

104. S. Perlo-Freeman et al., Chapter 4: Military Expenditure, Table 4A.1. 'The 15 Countries with the Highest Military Expenditure in 2010', in *SIPRI Yearbook 2011, Armaments, Disarmament and International Security*, p. 183.

Were these assets to be harnessed to boost growth and strengthen political cohesion over the medium term, further enlargement to the Western Balkans and Turkey would enhance the strategic projection of the Union, in particular in its neighbourhood. Failure to address the economic crisis and declining living standards would open the way to the intensification of right and left-wing populist movements and possibly result in an introverted and defensive Europe. Managing migration flows while avoiding a securitisation of the debate in this domain, attracting skilled migrants and addressing the challenge of diverse societies will be critical for the prosperity of the Union as globalisation enters a new, more competitive, stage.

Given the democratic and open nature of its polity, the attractiveness of its culture, its multilateral experience, and its value-based foreign policy, the EU possesses significant soft power attributes. It has considerable powers of attraction for other nations, notably in its neighbourhood, as well as for a growing number of non-state actors. But the maintenance and development of its soft power capabilities will depend on its ability to renew its growth model, protect its social model, and on how it deals with rising populism, xenophobia and anti-immigration policies. The political impact of EU soft power will also depend on its capacity to take effective international action, including the use of hard power when necessary.

China

By 2030, China may have become not only the major economic power but also the country with the largest share of material power.¹⁰⁵ Chinese influence in foreign and military affairs will be felt worldwide even if the comprehensive power index shows that Chinese influence is weakened by limits on its current soft power capabilities. What is more, China's material power could also be derailed by economic slowdown coupled with rising social tensions. Among the problems that might be exacerbated as a result of a slowdown are the question of political reform and the role of the Chinese Communist Party (CCP); corruption; ethnic conflicts; unemployment and inflation; the growing gap between rich and poor and between the coastal areas and the interior; migration due to inequalities in regional development; and environmental degradation.

Political reform will be central for the survival of the CCP. The legitimacy of the current regime rests on its ability to ensure higher standards of living for a rapidly expanding urban middle class. In order to address China's deeply-rooted crony capitalism and to

105. This composite index considers population size (weight of 0.8), GDP *per capita* at PPP (weight of 1.1), a technology proxy involving GDP *per capita* and population (weight 0.3) and military spending (weight of 0.9)'. J. Cilliers and P.S. Handy, 'South Africa as a Regional Power: Multiple Audiences, One Foreign Policy?', *Quaderni di Relazioni Internazionali*, no. 14, May 2011.

rebalance the economy, the system needs to be reformed. In the years to come, it is likely that the Chinese political elite will introduce various forms of political pluralism as a safety-valve against economic and social instability. This may be insufficient to counter domestic contestation, particularly in some regions, however.

China is likely to have the world's strongest aerospace power two decades from now, and it may become a leading military force.¹⁰⁶ Its current long-term military expenditure programme will give it a powerful defensive capability and a very predominant regional role, but it will probably not be in a position to project power decisively beyond the Asia-Pacific region. India is also rising as a military power and has the ambition to play a leading security role in the Indian Ocean, which may become a central geo-political area.¹⁰⁷

China's soft power may rise, given its economic performance and artistic and scientific achievements. Its leaders have stated this aim, which underlies various international initiatives such as the expanding Confucius Institutes. In July 2010, there were 316 Confucius Institutes in 94 countries, and there are plans to establish 1,000 centres by 2020. However, the slow process of political reform will curtail China's ability to project soft power effectively. In spite of attempts to liberalise, it is highly unlikely that China will become a democracy in the next two decades, and its soft power will suffer accordingly.

India

India could become a middle-income country by 2030 if it manages to sustain its current economic and demographic growth rates. However, its economy may stagnate due to rising inequality and a lack of skilled labour. The benefits of economic growth may not trickle down to the poorer segments of society and provide sufficient socio-political benefits for the bulk of the population. This would limit access to basic services such as education, health and adequate professional training to the middle and upper classes. It is estimated that, in the absence of sustained growth rates (at least 8.5 percent of GDP growth during the next twenty years) and of adequate poverty-reduction policies, two decades down the line around 20 percent of India's population – the extreme poor – will not have their most basic needs met, including clean drinking water, food security, and electricity. Paradoxically, India's services and IT sectors are expected to continue to boom, even while social exclusion increases and deepens the urban-rural and intra-urban divides. India's soft power, which is based on its democratic tradition and espousal of the principle of unity within diversity, may grow significantly. However, it will also be affected negatively by India's major handicaps: extreme poverty and high levels of inequality.

106. Chinese Academy of Social Sciences, *Science and Technology in China: A Roadmap to 2050* (Beijing: Springer, 2010).

107. See R. Kaplan, *Monsoon: The Indian Ocean and the Future of American Power* (New York: Random House, 2010).

Chindia: Centre of the world in 2030?

China and India are to increase their populations from 1.3 to 1.4 billion citizens and from 1.2 to 1.5 billion citizens respectively by 2030. These estimates are impressive in terms of the combined human power these countries will muster (3.9 billions citizens) and the depth of the challenges to internal and regional stability they will face. Their growing potential will depend largely on how they deal with a rapid increase in population ageing, particularly in China. The percentage of citizens under 30 years old in China will constitute 34% of the total population in 2030, a decrease of almost ten points compared to 2010. Likewise, the young population in India will decline from 58% in 2010 to 47% in 2030. It will be a great challenge to find employment for young skilled workers in both countries. Some believe that India's increasingly important role as a global labour provider – a role it already plays in the Gulf – will further enhance its soft power, but this will clearly depend on the availability of jobs for Indian migrant workers. Demography will affect the capacity of both governments to meet other challenges such as rapid urbanisation, uncontrolled rural urban migration and poverty. The international success of China and India will also greatly depend on their ability to address welfare and energy security challenges. There is much to do to build energy resources cooperation, and mutual understanding is a distant dream when considering the dispute over Himalayan water basin management and how vital it is for the future of India's burgeoning megacities.

If these two giants were to experience a political and economic meeting of minds (their booming economies are complementary in some respects), a new international reality would emerge. China and India will be the first and fourth largest world economies in 2030, respectively, together accounting for 34% of the global economy. Acting together, these countries could alter the rules of international interaction in a direction that would favour the developing world and challenge the hegemony of the United States. There are positive trends in this direction: bilateral trade between the two Asian giants is soaring at a sustained pace; people to people exchanges are increasing, particularly among students; visa regulations are being relaxed. But there are a number of contentious issues that must be solved before a substantial shift can occur. Border disputes, Tibet, and relations with Pakistan will continue to have an impact on Sino-Indian relations. Moreover, greater competition between the two for influence in southeast Asia should be expected. In this part of the world, the Indian and Chinese navies may eventually clash. Natural resources such as water and energy will also be a thorny issue. China and India are active members of the G20 and of the BRIC group. They cooperate increasingly in multilateral

fora and with UN bodies on climate change and other issues of mutual concern. However, China continues to block India's bid for a permanent seat in the UN Security Council and views the US-India agreement on nuclear technology as part of a containment strategy directed against Beijing. India remains suspicious of China's relations with Burma/Myanmar and with Pakistan (including the nuclear issue). Over the next couple of decades at least, given the breadth and scope of unresolved issues, it is highly improbable that China and India will come to an understanding. Mutual perceptions are still clouded by mistrust. However, should a *rapprochement* occur this would alter the rules of the game and herald the consolidation of a qualitatively different 'the Asian century.'

Brazil

The position of Brazil as an influential global actor is likely to be consolidated, although its capacity to exercise global influence is undermined by the rise of its population and the size of its economy, which it is estimated will account for less than 2 percent of global GDP in 2030. However, Brazil's potential is enormous. Brazil will use its energy resources and invest in renewable energies to foster technological development and innovation with a focus on balanced economic growth (4.7 percent average annual growth predicted by the World Bank), and a relatively strong policy to eradicate poverty and redistribute wealth. Brazil will be characterised by economic and social mobility over the next two decades, and an increasingly consolidated middle class will gradually overcome the long tradition of power concentration in the hands of a small elite. Social and political tensions over existing disparities and corruption may erupt, but they will not be unmanageable.

Brazil will develop pragmatic international partnerships without a particular regional bias and without giving preference to any one partner. Trade and economic relations will shift naturally towards the Pacific. The prospects for strengthening regional cooperation are brightest in South America, but Brazil will be reluctant to act as a regional leader (perhaps anticipating regional resistance). Instead, it will play a positive role in international rule-making and in global governance in areas that are relevant for Brazilian interests, be it climate change and the environment, trade negotiations and international finances, energy security, or access to water and basic natural resources. Brazil will remain a consensus-builder without compromising its independence and social development policies. As regards defence policy, Brazil will concentrate its efforts on securing its natural resources rather than on international military operations, although it will increase its participation in the latter. Brazil could become a 'soft-power superpower' if it succeeds

in consolidating its economic development and social cohesion models and in becoming more prominently engaged in world affairs.

Uncertainty for some great powers

Some of the countries that were great powers at the end of the twentieth century may continue to decline to middle power status. If present trends persist, this may be the case of Russia and Japan.

Russia

Russia has had to make a painful transition from a military superpower to a state with outdated great power attributes bogged down in internal political and economic crisis. After 2000, skyrocketing prices on the world energy market brought economic relief, but the Russian economy and state remain largely unreformed. Russian modernisation is no easy task. The hyper-centralisation and personalisation of the political system, the privatisation of the state and high levels of corruption, rent addiction and the dysfunctional relationship between the centre and the Russian regions all undermine and complicate sustainable modernisation, despite undisputable strengths such as a comparatively high level of education and rich mineral, oil, gas and other raw material deposits.

Major shocks aside (such as a sudden drop in the price of oil), the next twenty years are likely to be characterised by inertial development and tactical adjustments perceived as indispensable for the Russian elites to preserve power and pursue rent-seeking opportunities. In the event of enduring socioeconomic problems, xenophobic nationalism and extremism may radicalise the country, and exacerbate tensions in the neighbourhood. Only a systematic policy of political, economic and societal modernisation, including strategic decentralisation (including a much more sophisticated approach towards the problems in the North Caucasus), may reverse these trends. Russia will seek to maintain its great power status. Even though economic power is considered the most important feature of a great power, Russian military spending will remain at a high level. This may clash with attempts to modernise the Russian economy and ultimately stymie its military ambitions

Japan

Japan has impressive soft power capabilities given its technological creativity and the global outreach of its popular culture. Post-tsunami Japan, still reeling from the lost decade of the 1990s, is now focused on recovery but faces a serious demographic challenge. On current trends, Japanese society will become one of the oldest in the world,

with 39 percent of its population aged over sixty-five years by 2030 (by 2030, its population will be 120.2 million). Japan is the world's third-largest economy (it was surpassed by China in 2010), but is likely to be overtaken by India by 2012 in PPP terms. The role that Japan will play in 2030 will depend largely on the evolution of relations with China and its security alliance with the US. Japan will no longer be a major power but it will wield substantial influence over economic and financial affairs in East Asia and, depending on its foreign policy orientation and ability to leverage its soft power, perhaps beyond Asia too.

Rising middle powers

Middle powers will play a critical role in international affairs in the years ahead, first and foremost at the regional level, but increasingly at the global level as well. Several middle powers are already members of the G20. Those most likely to play a more influential role in 2030 are Indonesia, South Africa and Turkey: there are strong signs that they may consolidate their democracies and deepen social and economic modernisation. The soft power of democratic middle powers such as Turkey and Indonesia is likely to continue to grow at the regional and even global level. South African soft power, largely a function of its exemplary handling of the end of Apartheid, will depend on the political and social strength of its democracy, which has yet to overcome some of the most difficult legacies of the past.

Traditional middle powers such as Canada and Australia will sustain their level of influence in global affairs, as may Mexico if it manages to overcome some of its present governance difficulties. Europe's leading states, in particular Germany and France, may see their influence rise, particularly if they are able to take advantage of European integration. However, they may also be tempted to carve a niche for themselves as autonomous international players, and could meet with some success in this venture.

Indonesia

Indonesia, the most populous country in Southeast Asia and one of the driving forces behind the Association of Southeast Asian Nations (ASEAN), is a rising regional power. Indonesia's future is inextricably tied to ASEAN and vice versa. Its continued ability to manage a large and diverse archipelago of islands and thriving multi-faith democratic institutions may constitute an example for its neighbours and beyond. Indonesia is likely to become a pivotal player in the region by 2030 and to contribute significantly to fashioning cooperative relations between ASEAN, China and the US.

South Africa

With a current GDP equalling almost 25 percent of African production, South Africa could well remain the main priority destination of investments in Africa. However, its role of regional economic giant will be threatened by other economies of the continent like Nigeria, Egypt and Kenya, among others. Nonetheless, its geopolitical location at the crossroads of Asia, Southern Africa and the Atlantic trade area could help it maintain and develop its participation in global trade and its role as a logistical hub.

If it is to remain an influential middle power in the world of 2030, South Africa will have to strengthen its current regional and global soft power in order to compensate its potential relative economic and demographic decline.¹⁰⁸ South African leadership on the African continent will be highly dependent on the quality of its foreign policy and on its efforts to sustain an African economic renaissance. It must find a delicate balance in Southern Africa between constructive hegemony and the promotion of regional integration. Globally, South Africa's investment in South-South cooperation and multilateralism – in the BRIC group (Brazil, Russia, India and China), the BASIC countries (Brazil, South Africa, India and China), the India-Brazil-South Africa dialogue forum (IBSA), the Non-Aligned Movement (NAM) and the G20 – will bear fruit if it remains loyal to its post-Apartheid values. Competition with other African powers like Nigeria, Egypt, Ethiopia and Angola may undermine its leadership, or push it to assert itself as a power for change.

Turkey

Turkey has been a middle power for most of the last two centuries,¹⁰⁹ and its elites and people are confident about the country's global and regional position. Current trends suggest Turkey will maintain and even bolster its status as a middle power in demographic, economic, territorial and military terms. Indicators on economic growth, political stability and democratisation, political and cultural influence abroad, and citizen and elite confidence point in this direction. Turkey is also likely to become a pivotal regional power. Turkish citizens, capital and institutions will continue to integrate with the global economy and network society; and ties with the EU and Turkey's immediate neighbours and other regions will become deeper and denser. The recent emphasis on Turkey's role in the Middle East should be balanced by an awareness of the country's

108. 57 million in 2030, according to the International Futures data (Google Labs, 27 May 2011).

109. C. Holbraad, 'The Role of Middle Powers', *Cooperation and Conflict*, vol. 6, no. 1, 1971, p. 78, cited in M. Muftuler-Bac, *Europe in Change: Turkey's Relations with a Changing Europe* (Manchester: Manchester University Press, 1997), p. 7; B. Oran, *Türk Dis Politikası: Kurtulus Savasından Bugüne Olgular, Belgeler, Yorumlar* (Cilt I. 1919-1980), (Istanbul: İletişim Yayınları, 2001), p. 32.

growing relations with the EU, the Balkans, the Black Sea, Russia, the Caucasus, Central Asia, the Mediterranean and the US, and of its evolving and newly emergent links with the rest of Asia, Africa and the Americas.

Turkey's global role depends on its ability to pursue its interests within international groups and with its partners. Its international role is likely to be enhanced by membership of inter-state organisations such as the North Atlantic Treaty Organisation (NATO), the G20, the Organisation of the Islamic Conference (OIC), and by eventual accession to the EU. The latter could contribute significantly to the country's democratisation and enhanced international status. It is difficult to predict whether Turkey will join the EU by 2030 as there are both push and pull factors at work. Turkey may opt to work with different countries to further its interests in a rapidly changing Middle East, but this is unlikely to become an alternative to EU integration. To pursue a middle power career, Turkey must address key weaknesses, including unresolved minority issues (Kurdish and Armenian claims and rights), energy dependency, an environmentally unsustainable development model and the mismanagement of natural resources, human development shortcomings, and its exposure to potentially devastating seismic activity.

The EU middle powers

The international status of middle European powers such as Germany, France and Britain will depend on the evolution of the EU as a global player. Their international role will be strengthened in a polycentric world in particular if the pace of European integration is not derailed. However they may be tempted to play a global role of their own, and they may be recognised – as they are already by the great powers – as strategic players in their own right. China and Brazil¹¹⁰ have both made it clear that Germany rather than the EU is a more effective strategic partner, and that the EU is a key market but not a relevant strategic actor. The image of the EU as a political actor is also eroding in India, as EU member states make bilateral moves in the context of the crisis. Indians generally considered the NATO intervention in Libya 'brutal,' and as the result of 'undesirable' collective European action. The traditional preference of India for bilateral relations, especially in the political field, with the most prominent EU member states is thus gaining ground, while the long negotiating process of a Free Trade Agreement with the EU has damaged its image as a unified actor in the economic field.

110. Conversations with experts and officials in Brazil and China during the ESPAS missions.

Mexico

Mexico, which will have a population of 135 million by 2030, has great potential. If fulfilled, Mexico could acquire a strong international role. But despite its strategic location, large population, energy resources and concomitant potential, Mexico's ability to fulfil its ambitions will depend on whether it manages to resolve serious domestic problems, notably internal security threats posed by drug cartels and drug wars in the North, uneven economic development (deep regional disparities and related issues of migration, corruption and violence), and problems besetting the energy industry. Mexico's economic underperformance is mostly a result of inadequate reforms, in particular in the energy sector. Furthermore, economic development prospects, be they home-grown or based on foreign investment, are limited without security, and in its absence, Mexican citizens are likely to continue to migrate to the North.

Both northern Mexico and the southern US have experienced population growth and increased pressure on water resources. As a member of the North American Free Trade Agreement (NAFTA), Mexico could take on a more prominent role as an intermediary between South and North, but its capacity to act as an intermediary will depend on whether Mexico is able to balance its Northern American ambitions with its Central American identity and translate this dual identity into coherent policies.

Uncertainty for some middle powers

Some indicators suggest that Nigeria, Pakistan, Egypt and Iran may become middle powers over the next two decades. However, these countries are still struggling to provide their large populations with basic public goods and to consolidate their democracies (with the exception of Iran), and they also face other serious domestic challenges.

Nigeria

Nigeria is likely to become a dominant West African power by 2030 despite the deep imprint of unstable governance, but it must overcome many serious problems. The potential is enormous: its booming population is expected to reach 230 million by 2030 (compared to South Africa's 57 million). If it stabilises governance in the Niger Delta and the North in particular, and tackles endemic corruption it can become a middle power; if it fails to do so, it will be a huge neo-feudal state. The macro-economic indicators are bright, but the official goals of 13 percent annual growth, swift diversification to manufacturing and agriculture from oil and gas, and investment in health and education necessary to meet official development goals are deemed unrealistic.

Nigeria's fragile neighbourhood may have a serious impact on its stability unless its leadership in the Economic Cooperation Organisation of West African States (ECOWAS) remains constructive. The success of Nigerian ambitions (in competition with South Africa) to obtain a permanent seat on the UN Security Council (UNSC) will depend in part on its ability to transform its current potential into genuine prospects of prosperity for its citizens.

Pakistan

Pakistan, which is projected to have a population of 234.43 million people by 2030, certainly has the potential to become a middle power. But it must overcome political, economic and security challenges, namely military nationalism, corruption, education deficit, extremism and the spill-over effects of the Afghanistan war. These are major liabilities, but there are also positive trends, including broad social acceptance of democracy and the existence of political parties, a free media, an independent judiciary and a vibrant civil society. The most problematic issue is governance and corruption, and the ability of the government to deliver public goods for its citizens, including education, perhaps the most pressing priority.

Pakistan's ability to address these challenges will depend on its political order. With a functioning constitutional democracy, the country could overcome currently destabilising security threats and promote sustainable economic growth to ensure domestic stability and to push Pakistan toward middle power status. But if the history of authoritarian interventions and instability fuelled by centre-state tensions and a deteriorating economy persist, this could signal the gradual unravelling of a nuclear-armed state. The international presence in Afghanistan is likely to end before 2020, and if the US shifts its regional policy from a security-driven focus to an emphasis on democracy, this could benefit Pakistan.

Egypt

Egypt is in a process of democratic transition which, if consolidated, would turn the country into a Middle East powerhouse with extra-regional outreach. With a population of 106 million by 2030, Egypt can benefit from the favourable strategic situation of proximity to Turkey and the European market. However, the regional environment is very challenging, due to uncertain relations with Israel and Iran. A democratic Egypt playing a leading role in the Middle East and wielding enormous influence in Africa could compete with Nigeria and South Africa for a permanent seat on the UNSC. But Egypt must consolidate a democracy and achieve civilian control of its military forces; it must

also address massive poverty, marginalisation, and the impact of the ‘youth bulge’ of the 2000s on employment and unequal access to education. If it does so, Egypt may once again become the ideological and political hub of a new pan-Arab project that would replace nationalism with ‘democratic patriotism.’

Iran

Iran, which is on course to have a population of 84 million by 2030, could play an important global role if it made a transition to democracy, given its links with the most critical regions of the world and a diaspora with close ties to its homeland. Iran has extensive fossil fuel resources, a large youthful and well-educated population with fairly good access to the internet, which is actively using new social media and eager to be a part of the global community. Iran’s young people are clamouring for jobs and greater freedom to attain their full potential. However, if the current birth rate trend continues, Iran will soon have an ageing population and a shrinking working population.

The predominant challenge for the leadership of the country in the coming years will be to satisfy these demands and needs and create a more inclusive system of governance in order to maintain its hold on power. This will require both political acumen and economic ability, both of which are presently lacking. Structurally speaking, however, the sociological trends are difficult to evade; Iran will either have to open up more or slip into increasingly ineffectual authoritarianism, as its systemic contradictions may otherwise reach a breaking point.

The country’s economic future depends on the resolution of the problems besetting an oil industry hobbled by an ageing infrastructure. As long as the West imposes sanctions against Iran, it will have to use second-rate technology to maintain and upgrade its industrial equipment and machinery.

Regional instability and insecurity is likely to continue and Tehran’s attempt to secure its survival most likely includes achieving break-out capacity for a nuclear weapon. An arms race could be triggered in the region if the regime reaches this capacity. Iran’s greatest woes, however, are domestic rather than foreign.

A more democratic neighbourhood will constitute a challenge for Tehran, as it would subject the government to increased popular pressure for democratic reform similar to the demands during and after the presidential elections in 2009. Iran may react to its rapidly changing neighbourhood with more rigid authoritarianism or by promoting transparency and democratic rule.

Regionalism as a vector of power

The capacity to build regional cooperation groups to promote peace and social development will be crucial in determining the regional influence of states. Brazil is the great power in the best position to consolidate a regional group, on the basis of Mercosul and South American cooperation, but it would have to make a stronger substantive commitment.

Japan will continue to cooperate with its neighbours but will not fully join any regional group. Relations with China will have an important impact on its environment, determining whether regional groups cooperate or compete. China and India are both too large to engage in regional integration schemes with smaller states that go beyond soft cooperation, and they are too suspicious of one another to launch a bilateral scheme of regional integration.

Middle powers such as Egypt, Nigeria, South Africa and Indonesia will stand out as international actors with a significant capacity to play a pivotal role in regional cooperation, thus multiplying their influence. Indonesia is particularly well positioned, given its key role in ASEAN, and it may make democracy a core ASEAN issue and thereby resist Chinese influence. Moreover, it is likely to play a pivotal role in relations between ASEAN and China, and in Sino-American relations in southeast Asia.

A democratic Egypt is likely to be the major regional power in a New Middle East, bringing together the Arab states of the region to the exclusion of Israel. Its influence over the entire Arab world will increase significantly, allowing it to also play a pivotal role in relations with the EU, the US and Asia.

Turkey will gain from a more favourable regional environment, but at the same time it will try to affirm itself as a global player. However, it will find it difficult to play a significant role in regional integration in the absence of prospects for EU membership.

Aside from engaging in regional cooperation, middle powers will act globally or work with more or less formal networks of cooperation. There may be middle power hubs, as exemplified by possible cooperation between Turkey, Egypt, a democratic Iran and Iraq. Such hubs could become trans-regional as the power to co-opt extra-regional players becomes essential to achieve national goals. Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa – the so-called CIVETS group of countries – reflects this trend. The CIVETS are attracting foreign investors due to relative political stability, dynamic and diverse economies and a well-educated young population. They are forging a new wave of

development partnerships that transcend the rich-poor logic and promote south-south knowledge exchange and peer-to-peer learning across regions.

Small powers will likely be pressed to organise into regional or even trans-regional groups to promote common goals. They will be particularly interested in multilateral governance and global initiatives. Examples of this trend are the UN-based Global Governance Group (3G) initiated by Singapore, which gathers together twenty-eight non-G20 nations. Its main goal is to influence G20 policy and politics to render it more compatible with UN goals.

The search for autonomy in a polycentric world and the proliferation of informal interstate networks and groups may not be conducive to strengthen traditional regionalism. Some states will see regional integration as beneficial and as a platform to pursue their global ambitions; but others may invest energy in new non-institutionalised trans-regional frameworks. This will make soft cooperation predominate and make deep integration (as undertaken by the EU) unlikely elsewhere. However, these new forms of engagement may play an important role in easing regional tensions and supporting multilateral initiatives.

There is a real danger of power politics and negative alliances emerging in a polycentric world. Should this become a dominant trend, various competing unilateral projects may emerge globally and at the regional level in particular. This is most likely to happen in Asia, where the first signs of this trend are already visible: Japan is actively seeking to balance the rise of China by reinforcing its alliance with the United States; India may be tempted to act similarly, since it perceives Chinese-Pakistani relations as a threat. Africa is also likely to witness the rise of regional powers competing for continental influence, and this could be aggravated if the great powers compete for influence on the continent, particularly in a context of scarcity. But given a high level of interdependence among the great powers and a shared interest in a stable international system, there will also be a strong incentive to promote inclusive regional and global initiatives.

There will be no single wealthy nation (or group of wealthy nations) shaping the world stage: the most likely outcome will be an international system that is fragmented by a multiplicity of actors, and lacks the well-defined poles necessary for a traditional multipolar balance of power. Thus, the international system is likely to be mixed, with the great powers opting for a mix of balance of power, multilateral and even unilateral politics at the regional and even global levels. But it is also likely that many actors – the EU and its member states prominently among them – will consider it essential to reinforce multilateralism to avoid balance-of-power struggles and ensure the peaceful pursuit of interests.

However, some powerful states will likely block the emergence of an effective multilateral system. While the EU has largely delegitimised power politics within its borders and has a vital interest in a stable multilateral system, some of its more powerful members may try to ‘play both ways.’ This would have very negative consequences for the Union.

There is a serious risk of a ‘responsibility gap’ in an international system of diffused power. However, with deeper interdependence and global challenges such as climate change, economic development and security, no country will be in a position to guarantee prosperity and security alone over the long-term. Furthermore, states will not be the only actors able to strengthen or weaken international cooperation. Trans-national non-state actors, empowered by new technologies, will establish innovative forms of cooperation; ‘spoiler’ transnational actors will also pose asymmetric threats to state and citizens well beyond the control of individual states. As a greater diversity of actors becomes involved in finding solutions for shared problems, the gap between global governance demand and supply may widen, unless political capital is invested in the search for common ground between different priorities and in governance arrangements that more accurately reflect the new distribution of power and influence.



8. Diffusion of power but dangers of fragmentation

Power is no longer centralised in the bureaucratic structures of sovereign states. Increasingly, decisions with an impact on the daily life of citizens, such as the production and distribution of public goods, are beyond the purview of governments or states acting alone. As one analyst notes, ‘in today’s global information age more things are happening outside the control of even the most powerful states.’¹¹¹ Thus, key dimensions of state or central government power are being delegated (formally or informally) to non-state actors and networks, local authorities (in particular, cities), and private actors.

The twin drivers of this trend are the ICT revolution and demographic developments, particularly urbanisation. The diffusion of power highlights the role of these actors in politics and governance, and their capacity to influence and challenge the traditional monopoly of political parties on politics must be taken on board. In some cases, greater diffusion of power may be a source of fragmentation and tensions between central government and other actors.

A world of networks

Networks of non-governmental actors, and regulators and legislators in particular, are likely to play a highly important national and international role. Networks of expertise will provide essential knowledge to build public awareness of policy challenges and risks, and inform decision-making. Increasingly, NGOs will be responsible for providing public goods and promoting human rights,¹¹² and will intervene in strategic areas such as development, humanitarian aid, health and education. The high level of professionalisation and resources available to these networks will increase substantially, allowing them to handle humanitarian crises that states cannot address alone. The flooding in Pakistan in 2010 is an example of this: ten million people became homeless and the government required the support of international NGOs.

Networks of regulators and decision-makers can help approximate divergent positions and deliver blueprints for binding regulations or ‘soft law.’ Shared interest communi-

111. Joseph S. Nye, *op. cit.* in note 103, p. 113.

112. D. Karp, ‘Non-State Actors and Human Rights Responsibility in Weak Governance Zones: Unpacking the Public-Private Distinction’, International Studies Association Annual Convention, February 2010.

ties will take advantage of information technology to remain connected and informed, and will therefore become more influential. Private actors will have increasing resources at their disposal to influence state policy, leading to more collaborative public-private initiatives.¹¹³ Societies will increasingly deal with conflicting interests by forming pressure groups, making policy processes more complex. International actors that can use networks to connect with and influence others will wield significant power.

Government hierarchies will not be replaced by networked governance but individual government components may make more horizontal connections to take advantage of resources and expertise.¹¹⁴ The state may retain political authority and the legitimacy to decide on behalf of citizens, but it will shift from being a monopolist to a manager of authority.¹¹⁵ Governance networks will connect officials across borders, helping to expand regulatory reach, exchange information and provide technical assistance. There is likely to be conflict between governance networks and hierarchical institutions of government over the legitimacy of these networks, especially in democracies where critical importance is attached to transparency and accountability.

Economic actors will further expand their use of networks over the next twenty years as national borders become less relevant for global capital and labour. Production will increasingly cross borders and there will be increased multi-directional trade flows in previously national-level service provision. Networked communications will facilitate the shift away from the traditional mass media towards ‘mass self-communication’ (social media), providing impetus and strength to social movements. Popular movements pushing for rights and democracy as well as the disruption of hackers and cyber-anarchists will be manifestations of this; both can subvert the power of economic and political elites in autocratic and democratic states alike.

The network society will become a global reality within and across nations. This trend, which is associated with the development of strong civil societies and NGOs, will become more powerful in democratic societies in Europe and the United States.¹¹⁶ In emerging countries, the new middle class will be particularly active in social networks. Networked citizens and state power will also intersect increasingly in Brazil, India and middle power democracies like South Africa, Indonesia or Turkey. In China, decentralisation of state

113. E.-H. Klijn, ‘Governance and Governance Networks in Europe: An Assessment of Ten Years of Research on the Theme’, *Public Management Review*, vol. 10, no. 4, 2008, pp.505-25.

114. A.M. Slaughter, *A New World Order: Government Networks and the Disaggregated State* (Princeton: Princeton University Press, 2004).

115. P. Genschel and B. Zangl, ‘Transformations of the State: From Monopolist to Manager of Political Authority’, *Trans-State Working Papers* no. 76, Bremen, 2008.

116. A.M. Slaughter, ‘Power in the Networked Century’, *Foreign Affairs*, January-February 2009, at www.foreignaffairs.com/articles/63722/anne-marie-slaughter/americas-edge.

power in the economic and political arenas will lead to the fragmentation of institutional capacity (although not of the state), and to a growing array of accountability problems in the delivery of public services.¹¹⁷ China will eventually fail in its attempts to control individuals' access to information – via the internet or otherwise. The resolution of these tensions will require deeper political liberalisation.

Networked advocacy will take increasing advantage of modern technologies to spread information and mobilise people. This will become most apparent with the increasing predominance of national and international NGOs and advocacy groups, which are able to rapidly mobilise citizens and resources to pressure political and economic leaders. These advocacy networks will be able to exercise most influence in states with liberal-democratic polities. The translation of public values and interests into an active and engaged citizenry is at an incipient stage and may in time become a more permanent feature of life in autocratic states.

A world of private actors

In recent years, states have been delegating elements of sovereign capacities through new public-private partnerships (PPPs), not just in the economic field, but in areas where the state traditionally has exercised a monopoly, including security and intelligence. Private actors will increasingly become agenda-setters, establishing the limits of action, guaranteeing contracts and providing order, including for states.¹¹⁸

Transnational corporations (TNCs) will contribute to the establishment of economic governance standards, and shape the behaviour of other actors on social and environmental issues. Private firms will have increasing socio-economic influence, particularly as providers of public services traditionally provided by states. Market actors could play a positive role in economic development and social well-being, but they may also increase inequality and limit socio-economic rights.

As the influence of private actors grows so too will the need to hold them accountable. There are increasing international accountability norms and standards set by intergovernmental organisations that will seek to regulate global markets while supporting human rights and environmental policies. There will also be increasing attempts by governments and corporate institutions to coordinate companies' responses to environmental, social and governance issues. The greater emphasis on corporate social responsibility (CSR) epit-

117. M. Painter, 'From Command Economy to Hollow State? Decentralisation in Vietnam and China', *Australian Journal of Public Administration*, vol. 67, no. 1, 2008, pp. 79-88.

118. S. Park, 'The UNEP-FI: Creating the Environment for the Finance Industry', International Studies Association Annual Convention, February 2010.

omises this new and evolving international accountability infrastructure.¹¹⁹ There will be more positive examples of CSR such as that of Debswana (De Beers) in Botswana, which as the largest single employer in the country after the government, provides its employees with a range of social services.¹²⁰ Negative examples, such as that of international oil companies operating in the Niger Delta that disregard the impact of oil-extraction activities on the environment and human health, will remain a major problem.¹²¹

Fighting all forms of corruption will become an increasingly important part of global actions on CSR. Initiatives such as the UN Global Compact, which seeks to persuade companies to adopt business practices in line with universally accepted principles in the areas of human rights, labour standards, the environment and anti-corruption, are likely to proliferate.¹²² There will be a growing need for non-governmental efforts to curb corruption in the private sector, particularly Latin America, South Asia and Africa where business executives are particularly sceptical of government anti-corruption strategies.¹²³ Asian companies will be subjected to the scrutiny of private actors, and measures should be adopted to regulate social and environmental responsibilities, particularly those linked to carbon reduction or efficiency. A good example of this is the Asia Sustainability Rating (ASR), which benchmarks leading Asian companies and evaluates their ‘strategic sustainability,’ including their performance with regard to the environment, corruption and governance.¹²⁴ Sustainability will remain a key challenge for private actors. However, the rise of a very influential group of hyper-rich people in emerging economies will make the fight against corruption more difficult and may deepen social mistrust.

TNCs will take on increasingly state-like roles and provide public goods, particularly social and welfare services, in particular health care, when state agencies are unable or unwilling to provide them. There will be a global trend towards an integrative model in which the firm is both a private and political actor. Corporate models of North-South cooperation – such as ‘social enterprises’ – will grow in importance. Fair trade enterprises are a global example of the combination of market mechanisms and a sense of social purpose that is likely to become much more common in the future.¹²⁵

119. D. U. Gilbert, A. Rasche and S. Waddock, ‘Accountability in a Global Economy: The Emergence of International Accountability Standards’, *Business Ethics Quarterly*, vol. 21, no. 1, January 2011, pp. 23–44.

120. ‘De Beers, Botswana and De Beers celebrate a 40-year partnership’, June 2009, at www.debeersgroup.com/en/Media-centre/Press-releases/2009/Botswana-and-De-Beers-celebrate-a-40-year-partnership/.

121. United Nations Environment Programme, *Environmental Assessment of Ogoniland* (Nairobi: UNEP, 2011). Available at: http://postconflict.unep.ch/publications/OEA/UNEP_OEA.pdf.

122. For more, see United Nations Global Compact, at www.unglobalcompact.org.

123. Transparency International, *Bribe Payers Index 2008*, December 2008, at www.transparency.org/policy_research/surveys_indices/bpi/bpi_2008#bpi_table.

124. See Asian Sustainability Rating at www.asiansr.com/.

125. For more, see B. Huybrechts and J. Defourny, ‘Exploring the Diversity of Fair Trade Social Enterprises’, *EMES European Research Network*. Centre for Social Economy, University of Liege, 2010.

The end of the twentieth century saw the emergence of a thriving private military industry (PMI) which first took hold in the security vacuum left by the former protagonists of the Cold War, especially in Africa. Over the last decade this industry has grown exponentially all over the world, as the United States in particular has become increasingly reliant on private military companies (PMCs) in its global military operations.

PMCs in numbers

Accurate data on the private military industry is impossible to obtain due to the international stratification of this market, its opaque sub-contracting system and a general absence of government transparency in this domain. But its growth rates over the last two decades have been exponential and the private military industry is big business¹²⁶ Revenues from the global international security market were estimated at USD 55.6 billion in 1990, USD 100 billion in 2000, USD 202 billion in 2010, and are expected to rise to USD 218 billion in 2014. The United States Department of Defence in 2008 alone issued contracts worth more than USD 100 billion to PMCs. The European militaries meanwhile outsourced an estimated €16 billion in 2009. In 2010 the United States was employing almost 200,000 contractors combined in Afghanistan and Iraq. About a quarter of these were Americans, around 40 percent were host country nationals and the remainder was made up of third country nationals. Of these anywhere between 28,000 and 70,000 were heavily-armed private security contractors.

The private military industry will have four main roles in the international system in the decades to come: PMCs will act as the logistical backbone of modern militaries; PMCs will gain an increasing role as foreign policy actors; PMCs will increasingly lay claim to independent actor status; and the private military industry will expand to the peacekeeping sector. In the first two instances, PMCs reinforce state power; in the third and fourth they contribute to further erode state responsibility, although states will remain responsible under international law as stated by the 2008 Montreux Document. It likely that the activities of PMCs will be covered and regulated by international

126. Private Military Forces, at www.privateforces.com/index.php?option=com_content&task=view&id=2090.

law,¹²⁷ but their use by governments will raise fundamental ethical, legal, military and even economic issues.¹²⁸

States of all stripes will rely increasingly on PMCs for expertise and technology, given the threats posed by a non-hegemonic world, both domestic and those stemming from regional rivalries. The debate over the costs and benefits and morality of relying on PMCs as international peacekeepers is far from over; it seems safe to forecast that because of the reluctance of most Western states to engage their troops in peacekeeping operations, and ongoing wars in various countries and the increase in resource conflicts, the involvement of private actors in peacekeeping operations will grow.

A world of cities

It is estimated that some 60 percent of the world's population (4.9 billion people)¹²⁹ will be living in cities within the next fifty years. This both reflects and affects economic growth. The relationship between migration and development may change as a consequence of urbanisation. Urbanisation will also exacerbate environmental depletion and increase tensions over resources such as water, energy and logistics, which are necessary to support large population centres.

Developed countries will continue to be more urbanised than developing and emerging countries (80 percent compared to 55 percent, in 2030); however, urban growth will be strongest in the developing world, where the urban population will increase from 2.5 billion in 2010 to 3.9 billion in 2030. Cities in Africa will grow fastest, followed by those in Asia. Developing and emerging countries will host an increasing share of the world's urban population: more than 80 percent of the global urban population will be living in Asia, Africa and Latin America in 2030. However, the countries with the highest numbers of urban citizens will continue to have a considerable number of rural inhabitants. China and India, with 1.5 billion urban citizens between them in 2030, will still have over a billion rural citizens.

The number of megacities with more than 10 million inhabitants is projected to increase from sixteen in 2009 to twenty-nine in 2025, and megacities will account for 10.3 percent of the total urban population (see Figure 24). Three of the four cities that are likely to

127. For the increased procurement of military services by states, individuals and private firms, and the concomitantly increased presence of armed personnel working for private companies in countries experiencing public unrest or armed conflict, see: A. Faite, 'Involvement of Private Contractors in Armed Conflict: Implications under International Humanitarian Law', *Defence Studies*, vol. 4, no. 2, Summer 2004, at www.icrc.org/eng/assets/files/other/pmc-article-a-faite.pdf.

128. A. Leander, 'The Market for Force and Public Security: The Destabilizing Consequences of Private Military Companies', *Journal of Peace Research*, vol. 42, no. 5, September 2005, at <http://jpr.sagepub.com/content/42/5/605.short>.

129. Unless otherwise specified, figures in this section are drawn from UN Department of Economic and Social Affairs, *World Urbanisation Prospects: The 2009 Revision Highlights*, 2010, at http://esa.un.org/unpd/wup/doc_highlights.htm.

pass the threshold of 10 million inhabitants by 2025 are in developing countries. Three of the ten biggest cities in 2030 will be Indian; five of the twenty-five biggest cities will be Chinese. Small and medium-sized cities will represent an even larger proportion of the urban population by 2030. In 2009, 51.9 percent of the urban population lived in towns with fewer than half a million inhabitants. These small urban centres will account for 45 percent of the expected increase in the world urban population between 2009 and 2025, a trend that is likely to continue up to 2030. Medium-sized cities of between 500,000 and two million inhabitants will grow the most in the future.¹³⁰ India alone will have sixty-eight cities with a population above one million.¹³¹

Figure 24: The 20 largest cities in 2030



Source: UN Department of Economic and Social Affairs (2010b).

130. B.H. Roberts and K. Fisher, 'Urban Regional Economic Development in Asia: Trends, Issues and Future Challenges', *Australasian Journal of Regional Studies*, vol. 12, no. 3, 2006, p. 361, at search.informit.com.au/documentSummary;dn=020968760469630;res=IELBUS.

131. S. Sankhe et al., *India's Urban Awakening: Building Inclusive Cities, Sustaining Economic Growth*, McKinsey Global Institute, April 2010: 9, at www.mckinsey.com/mgi/reports/freepass_pdfs/india_urbanisation/MGI_india_urbanisation_fullreport.pdf.

Cities will also be a locus of economic concentration. With agriculture representing a declining part of wealth creation relative to industry and services, they will become key generators of wealth and employment. Already today, 80 percent of world GDP is generated in urban areas.¹³² Cities are often the economic powerhouses of a nation: Bangkok and Jakarta, for example, account for more than 30 percent of their countries' national GDP.¹³³ Today, 600 of the urban world's centres generate 60 percent of global GDP. In 2025, a group of 600 cities will still account for the same share of global GDP, but the composition of the group will have changed as the world's centre sways towards the East and the South. 136 new cities, all from the developing world and especially from China, will join and replace other Western hubs in these ranks. Notably, it is thanks to the performance of middle-sized cities that the top 100 world cities are projected to produce 35 percent of global GDP. Emerging market 'middleweight' cities with 150,000 to ten million inhabitants are set to move centre stage in the global economic outlook. The cities of Ahmedabad (India), Fushun (China) and Viña del Mar (Chile) for example, will contribute to 40 percent of world GDP growth until 2025 - which is more than the megacities of all the world's countries combined.¹³⁴ International companies and governments will have to adapt to this changing urban landscape.

City governance will have roles and mandates extending beyond service provision. Urban leadership will be needed to ensure that the economic-led spatial and social reshaping of megacities does not exacerbate the creation of extreme divisions between high and low income groups.¹³⁵ In this sense, the decentralised federal state/city – as in Berlin¹³⁶ – could become a model for elected municipalities, enabling the provision of effective educational, social, environmental and health services, although it will be adapted to different constitutional arrangements.

The greater demographic and economic power of cities will have powerful political implications. Urbanisation poses an important governance challenge. In order to accommodate a growing number of urban dwellers, city management methods and skills must improve and infrastructure investment must accelerate. The cumulative infrastructural requirements between 2005 and 2030 are estimated at USD 41 trillion.¹³⁷ Urbanisation

132. *Urban World: Mapping the Economic Power of Cities*. McKinsey Global Institute, March 2011, at www.mckinsey.com/mgi/publications/urban_world/pdfs/MGI_urban_world_exec_summary.pdf.

133. B.H. Roberts and K. Fisher, op. cit. in note 130.

134. *Urban World*, op. cit. in note 132.

135. S. Sassen, 'The Specialised Differences of Global Cities', *Urban Age Essays*, December 2008.

136. London School of Economics Urban Age Programme, *Integrated City Making*, London, 2008, pp. 14-15, at https://www.lse.ac.uk/collections/urbanAge/india_report/_ICMR.html.

137. V.V. Doshi, G. Schulman and D. Gabaldon, 'Lights! Water! Motion!' in A. Kleiner & M. Delurey (eds), *The Megacomunity Way: Mastering Dynamic Challenges with Cross-Boundary Leadership* (Washington D.C.: Booz Allen Hamilton, July 2007). Available at: www.boozallen.com/media/file/Lights_Water_Motion.pdf.

increases the pressure on central governments to decentralise public services given the need for city administrations to be accountable.¹³⁸ Governments must adapt decision-making and forge a consensus with corporations, interests groups, communities and stakeholders.¹³⁹ The private sphere is likely to take on more public service functions, raising new questions about democratic control, transparency and accountability.

Both public and private entities have an idea of what cities should be like. Given the democratic legitimacy of elected city governments formal decision-making power may not be transformed, but agenda-setting and implementation is likely to change. Fostering economic growth while reducing poverty and minimising environmental impact will be shared goals, independently of the different stage of development of global megacities.¹⁴⁰ Citizen demands for the direct elections of city authorities and participatory democracy will increase across different regions within the limits of existing political cultures. Established megacities such as London, Tokyo and New York may experience less tension over the exercise of political power than emerging megacities in countries undergoing significant social and economic transformation.

In Brazil, decentralisation and processes such as participatory budgeting have mutually reinforced national and local level democracy. In India, national democracy is not yet replicated at the city level, where a technocratic top-down culture prevails.¹⁴¹ However, some federated states are striving for more autonomy, with local political-economic elites connected to certain booming capitals. In authoritarian states, cities may become 'participatory islands' in otherwise authoritarian settings, fostering local participation in the absence of national-level democracy.

138. B.H. Roberts and K. Fisher, op. cit. in note 130, p. 374.

139. G.E. Frug and L.D. Brandies, 'Delivering Urban Governance in London', *Urban Age Bulletin*, no. 3, November 2005, at http://www.urban-age.net/0_downloads/archive/Gerald_Frug_2005-Delivering_Urban_Governance_In_London-Bulletin3.pdf.

140. London School of Economics Urban Age Programme, op. cit. in note 136.

141. M. Hanagan and C. Tilly, 'Cities, States, Trust and Rule: New Departures from the Work of Charles Tilly', *Theory and Society*, vol. 39, no. 3-4, March 2010, pp. 245-63.



9. Global initiatives but a governance gap

Global governance is entering uncharted waters, as international cooperation is in flux. The international system is polycentric, with a broad range of important countries holding diverse worldviews, and with sprawling networks of non-state actors crowding the multilateral stage. More countries matter today to international affairs than at any time over the last two centuries of Western hegemony. Shifts in underlying power assets will amplify the voice and distinctive message of emerging countries at the regional and global levels. The diffusion of power to non-state actors will engender an ever-richer marketplace of ideas, in which public authorities will compete with a variety of other players to dominate narratives, set agendas and find solutions to existing challenges.

Global politics

These trends will result in a potentially transformative development: the embedding of inter-state relations in a much more dense and complex transnational global political arena. It may be premature to speak of a fully-fledged paradigm shift, as elements of traditional inter-state politics such as the strategic pursuit of the national interest, diplomatic negotiations and balance of power co-exist with transnational webs of influence and an emerging global public sphere. It seems more accurate to describe the international system as featuring an unprecedented paradigm mix.

International politics will be shaped by heterogeneous actors with different priorities involved in a plurality of formal and informal relations. Powerful individual states and multilateral institutions will remain pivotal players, but there will be a shift away from state-based governance initiatives and mechanisms. In short, international, transnational and trans-local relations (between sub-state authorities such as cities and regions) will coexist in the context of pervasive globalisation. This mix will be highly fluid. Transnational and trans-local relations are likely to prove ever more relevant for governance and decision-making beyond the state. They will not replace the state and classic international relations but they will transform the way in which politics is conducted within and across borders.

This shift is vividly conveyed in the formulation, ‘transition from *la raison d’état* to *la raison du monde*.’¹⁴² Government strategies and decisions must take into account not just domestic variables but increasingly those with a critical transnational and global dimension. This is evident, for example, in the interplay between internal and external variables surrounding current decisions on the economic policies of EU and notably eurozone member states. It also applies to the difficult equation between adjusting growth models and taming global imbalances that surplus and deficit countries are committed to draw up in the context of the G20. Domestic politics will not become a mere function of global trends; rather, the exercise of government may be dislocated to a new sphere, encompassing different interests and interactions beyond the nation state.

The politicisation of the international arena, with justice and legitimacy taking centre stage in the debate, is a result of four main factors.¹⁴³ First, there is the central issue of redistribution and sharing the costs of protecting the ‘commons’ to avert catastrophic climate change. Second, inter-societal and not just inter-national issues will be at the top of the international agenda (from market regulation and welfare to human rights). Third, the inputs from a variety of non-state actors and transnational networks with distinctive agendas will enrich but also complicate deliberation. Fourth, leading state actors hold heterogeneous worldviews. Most emerging countries have multiple identities as developing countries and growth engines, as revisionist and *status quo* powers, as beneficiaries of an open multilateral order, and as guardians of national sovereignty.

The new constellation of power and ideas submits established institutional arrangements to a severe test, affecting both their decision-making processes and substantive agendas. The fairness of the output of multilateral negotiations, namely the collective perception that they deliver an acceptable balance of rights and responsibilities for different stakeholders, will count as much as the inclusiveness of the process. The ability of governance frameworks to withstand latent tensions and prevent disruptions emanating from sudden shocks will matter as much as responding promptly to sudden shocks. The challenge will be to build resilient governance frameworks able to monitor risks as well as national or multilateral measures to manage them, as well as to mobilise rapidly in case of disruptions such as natural disasters, banking crises, extreme food price swings or cyber-attacks. Furthermore, governance innovation will come not only from the top down, in the form of binding universal agreements, but

142. P.C. Cerny, *Rethinking World Politics. A Theory of Transnational Neopluralism* (Oxford: Oxford University Press, 2010).

143. A. Hurrell, *On Global Order: Power, Values and the Constitution of the International Society* (Oxford: Oxford University Press, 2007).

also and increasingly from the bottom up, through varied interactions between public and private actors.¹⁴⁴

Charting the future: the governance factor

The momentous economic growth rate of emerging countries is the single most important driver reshaping international relations and world politics. It gives rise to the core challenge of sustainability, as the living standards of large segments of the population of the developing world converge with that of citizens of the developed world in a context of limited resources. The conjunction of an 'the age of convergence' with the onset of 'the age of scarcity' will take interdependence to a new level.¹⁴⁵ There is an inherent tension between aspirations for growth and limits to growth. Striking an acceptable (legitimate and effective) burden-sharing balance will be a critical challenge for governance frameworks.

Traditionally framed as an environmental issue, sustainability actually encompasses different policy fields including finance (investment), trade (subsidies and restrictions), broad economic policies (commodity inflation, costs of green growth), state and human security, and migrations.¹⁴⁶ The question is how to rebalance international politics and economics to make room for rising powers while protecting the commons and halting climate change.

The risk is that limits to growth may entail a shift from a positive-sum to a zero-sum world economy.¹⁴⁷ If so, intense distributional conflicts may break out within and between states and societies, given the need to share a shrinking pie. This is the core dilemma at negotiations on emission stabilisation or reduction targets, and the justification for shared but differentiated responsibilities. Limits may pit incumbents against newcomers, with the risk that a zero-sum economy will engender a competitive and conflict-prone zero-sum world.¹⁴⁸

The unprecedented shift in the international system over the last decade will unleash its full transformative potential over the next 20 years. Looking ahead to that time, two broad scenarios can be sketched out: global fragmentation or global cohesion. While

144. Global Redesign Initiative, *Everybody's Business: Strengthening International Cooperation in a More Interdependent World*, Report of the Global Redesign Initiative, World Economic Forum, 2010.

145. J. Sachs, *Common Wealth. Economics for a Crowded Planet* (London: Allen Lane, 2008); M. Spence, *The Next Convergence: The Future of Economic Growth in a Multispeed World* (New York: Farrar, Straus & Giroux, 2011).

146. A. Evans, 'Globalisation and Scarcity. Multilateralism for a World with Limits', *Centre on International Cooperation*, New York University, 2010.

147. M. Wolf, 'The Dangers of Living in a Zero-Sum World Economy,' *Financial Times*, 18 December 2007.

148. G. Rachman, *Zero-sum World Politics: Power and Prosperity after the Crash* (London: Atlantic Books, 2010).

neither of these ideal-type scenarios is likely to occur, in 20 years time the world will shift closer to one or the other.

Global fragmentation happens if zero-sum thinking translates into mutual suspicion, and if nationalist protectionist sentiments have triggered a process of ‘de-globalisation’. Global cohesion arises if the pressure and growing awareness of common challenges spurs a new sense of international and transnational solidarity, leading to a proliferation of ties within a pluralist international community. The emergence of a ‘global conscience’ of sorts will be critical to address the crisis of globalisation.

At present and for the foreseeable future, major global powers and most middle powers do not seem set on challenging each others’ vital interests; rather, they appear intent on painfully working out solutions to preserve an open international system – a fundamental condition to address domestic and transnational challenges. The Doha round is moribund but trade partners scramble to conclude bilateral or plurilateral comprehensive trade deals. Definitive solutions to global imbalances prove elusive but G20 members have accepted tight political commitments on domestic policies at the Cannes summit. Climate financing is in short supply in times of crisis but key stakeholders are negotiating how to set up a Green Climate Fund to support mitigation and adaptation efforts. Threat perceptions concerning the Iranian nuclear programme are different in the West, Russia and among most emerging powers but difficult negotiations have led to adopting rounds of sanctions targeting the Iranian regime. All of this is far from adequate, but it is not evidence of mutual alienation either. The inclusion of complex interdependence in the strategic calculus of most powers suggests considerable potential to avert a scenario of fragmentation and conflict. However, domestic political turmoil resulting from economic stagnation, growth constraints and the perception that either are caused by malicious competitors may reduce the political space to sustain effective cooperation.

The capacity to devise a ‘whole of governance’ approach will be critical to determine whether governance frameworks can address new challenges. A ‘whole of government’ approach is necessary to mobilise all relevant policy tools and maximise the impact of public intervention at home and abroad. Equally, a whole of governance approach will be required for viable collective action at the international level. This means bridging different levels of cooperation, from the global to the regional and local to, say, reduce CO₂ emissions or prevent violent conflict; it means linking different but connected policy areas, such as trade and food security, or peace-building and resource scarcity; and it means shaping multi-stakeholder initiatives engaging the resources and expertise of networks of public and private actors – these are the three basic dimensions of the ‘whole of governance’ approach.

On a political level, the conflation of the ‘age of convergence’ and the ‘age of scarcity’ sets issues of equity and justice at the centre of the global agenda and governance processes. Normative differences must be addressed to find legitimate solutions to these new challenges.

Governance and responsibility: normative competition and contamination

Ideas matter to international politics as they frame perceptions and inspire action. The redistribution of power is triggering a proliferation of ideas, and the end of the agenda-setting monopoly of the US and Europe. This trend is likely to persist over the next two decades.

The end of deference and of normative monopolies is part of the same process. There is consistent evidence of the growing confidence of emerging powers to assert their world-views and agendas, sometimes at variance with those upheld by the US or the EU. In the development field, new donors such as China take a different approach, dismissing conditionality and governance reform, and privileging commercial deals and infrastructure development. Furthermore, established sources of normative power no longer command the authority to shape conventional wisdom. The neoliberal Washington Consensus was challenged after the 1997 Asian financial crisis, and then torpedoed by the 2008 financial meltdown that stemmed from then dominant prescriptions on how to run global financial and economic affairs.¹⁴⁹ The permissive consensus around the adoption of capital control measures by Brazil, Chile, Indonesia and Thailand, among other countries, including cautious endorsement by the International Monetary Fund (IMF), confirms this trend.

In the aftermath of the financial crisis, once the short-lived ‘fellowship of the lifeboat’ that enabled the global stimulus package had vanished, serious differences emerged about how to address global economic imbalances. The main cleavages have divided surplus and deficit countries, as well as partisans of austerity and advocates of more relaxed monetary policy to spur renewed growth. In the attempt to find equitable solutions and to reconcile respective priorities no international actor will be presumed to ‘know best.’ The credibility of new ideas will be based more on performance and argument than on claims to past accomplishments.¹⁵⁰

149. N. Birdsall and F. Fukuyama, ‘The Post-Washington Consensus’, *Foreign Affairs*, vol. 90, no. 2, March-April 2011.

150. P. Khanna, *The Second World: How Emerging Powers Are Redefining Global Competition in the Twenty-first Century* (London: Penguin Books, 2008).

That said, the future may be less about one idea or normative approach prevailing over others than it will be about the mutual, albeit difficult, adjustment and convergence of respective normative approaches, or the co-existence of different but not necessarily incompatible ones. The capacity to find a synthesis between different norms and ideas will be a critical dimension of power and authority in the international system, and a key function of global governance frameworks.

While there is no dominant paradigm for growth and sustainable development, separate national tracks are not necessarily divergent. Advanced and emerging countries alike seem bent on working out an effective compromise between market-induced competitiveness and state-driven regulation, bringing industrial policies back in not only to rescue faltering economic sectors but also to drive resources to growth areas and stimulate innovation. In other words, ‘the world is not rejecting openness and markets; it is asking for a more expansive notion of stability and economic security.’¹⁵¹ This quest permits a degree of contamination rather than competition among ideas and models.

At the same time, the debate taking place under the aegis of the UN High Level Panel on Global Sustainability suggests some, albeit distant, possibilities for a new deal based on the imperative need to decouple economic growth from intensive resource exploitation, and to invest in green growth. The emerging agenda would frame environmental issues in the context of broader human and social development concerns, focus on access to and responsible management of water, land and energy resources, draw on technological innovation, and mobilise market forces and private actors to activate new financing mechanisms. While positions differ, it has been noted that when addressing issues of sustainability ‘the North is less North and the South is less South’ than in the past.¹⁵²

The Seoul Development Consensus for Shared Growth adopted at the G20 summit in November 2010 sketches out an approach to development that goes beyond the traditional aid agenda and focuses on the conditions for self-sustained economic growth, drawing on the experience of developmental states such as South Korea and other emerging Asian economies. The Seoul plan of action, driven by a working group chaired by South Korea and South Africa, encompasses the priorities of traditional donors, including good governance, with those of emerging donors, such as physical infrastructure, access to financial services and knowledge sharing.

151. J. Ikenberry, ‘The Future of the Liberal World Order’, *Foreign Affairs*, vol. 90, no. 3, May-June 2011.

152. Boston University and Pardee Centre, *Beyond Rio+20: Governance for a Green Economy*, Pardee Center Task Force Report, March 2011:8, at <http://www.bu.edu/pardee/files/2011/03/Rio20TFC-Mar2011.pdf>.

Whether there is a shift towards normative fragmentation or contamination will depend on a range of factors, each of which harbours potential for convergence or divergence. First, deep interdependence raises the cost of fragmentation and creates incentives for state and non-state actors to compromise so as to preserve an open international system and reduce transaction costs. At the same time, interdependence exposes mutual vulnerabilities and may engender simmering tensions if economic and security challenges are attributed to, or are actually due to, the freeriding or otherwise unfair behaviour of third parties. Second, through their multiple inputs, non-state actors can provide scientific evidence or challenge the official discourse, thereby preventing the crystallisation of irreconcilable positions and helping dissolve ‘ideological’ blocs, whether on environmental or humanitarian issues. Conversely, non-state actors such as nationalist campaigners or powerful lobbies could harden national positions in the face of international frictions, leaving less scope for manoeuvre to leaders on the global stage.

Third, and perhaps most importantly, the competition of ideas and normative preferences will take place against the long historical backdrop of liberalism. Some wonder whether there may be alternative paths to modernity rooted in different cultural traditions and departing from the liberal order. There is even a concern that a new breed of authoritarian market economies such as represented by China or Russia may constitute an alternative model to liberal democracies.¹⁵³ Others stress that emerging powers are increasingly embedded in a broadly liberal order that may be stretching, struggling and experimenting to accommodate them, but is not necessarily waning.¹⁵⁴ Clearly, however, for the first time, the Western growth model is being perceived as unsustainable and unlikely to be generalised. The extent to which Europe and the US can renew their growth model and build new competitive advantages is a central issue for their future influence and leadership on the global stage.

Reforming global governance: synthesis, resilience and fairness

The apparent inadequacies of global governance are often described in functional terms, as a deficit between the demand and supply of collective solutions to common problems. However, bridging this gap is not principally a matter of institutions and resources (although both count very much) but an eminently political challenge. The challenge lies in drawing a workable and legitimate synthesis from the growing plurality of viewpoints, actors and modes of cooperation. In other words, it is necessary to have frameworks for

153. R. Kagan, *The Return of History and the End of Dreams* (London: Atlantic Books, 2008).

154. *Ibid.*

cooperation that embrace and harness pluralism and diversity to deliver consistent solutions and, where possible, overall synthesis.

Mini-lateral action involving many different sorts of actors may prevail over multilateral stasis, as a plurality of actors (contemporary merchants, fraternities, religious groups, jurists and philanthropists) pragmatically bypasses mummified governments, offering solutions and building public-private partnerships from the local level up.¹⁵⁵ But there are problems with the *ad hoc* and largely voluntary nature of many recent arrangements, including the Proliferation Security Initiative (PSI), the ‘nationally appropriate mitigation actions’ endorsed by developing countries to reduce business-as-usual emissions, or the codes of conduct and certification procedures adopted by companies operating in sensitive sectors such as the extractive industry or forests. Questions abound as to the credibility, enforceability, accountability and sustainability of these and other mechanisms.

There will be much governance experimentation in the coming decades. The international community may not be experiencing a ‘constitutional moment’ as it did in 1945, when the basic rules of the game in international politics, security and economics were reset.¹⁵⁶ But the moment is certainly transformational, given the dispersion of power, the deepening of interdependence and the spread of transnational risks. The next decade or two are unlikely to see a quantum leap forward, but rather the creeping codification of many aspects of international, transnational and trans-local relations, through fully-fledged treaties, networked coordination of national policies based on shared benchmarks, or public-private codes of conduct.

The common denominator of most strands of governance reform and innovation is the quest for synthesis, namely common political ground to enable cooperative work in a more diverse world. This must be sought at three levels. First, there is a need for a synthesis of the priorities and viewpoints of a more heterogeneous range of major state actors, many of which have started the transition from international rule-takers to rule-makers. This is the case, for example, for the ongoing debate on the norms and rules presiding over the implementation of the responsibility to protect and consequent military intervention, as a last resort, in case of mass atrocities. Second, a synthesis between the multiple inputs of state and non-state actors is required. Markets and transnational civil society actors foster agendas and take initiatives which have little to do with the national interests of any given country, but a lot to do with the domestic politics of most of them. The contribution of non-state actors to agenda-setting and implementation is necessary

155. P. Khanna, *How to Run the World: Charting a Course to the Next Renaissance* (New York: Random House, 2011).

156. S. Patrick, ‘Irresponsible Stakeholders?’, *Foreign Affairs*, vol. 89, no. 6, November-December 2010.

for issues as different as the regulation of transnational financial institutions or the fight against corruption. Third, a synthesis between different levels and modes of cooperation is necessary. For example, new forms of cooperation between global and regional bodies are emerging, not least as a consequence of the economic crisis, in the financial and development fields. Emerging regional financial arrangements in Europe and Asia and empowered regional development banks in Asia, Africa and the Americas are critical to provide liquidity or resources to countries in need.

In sum, the future will be less about stark alternatives than about complexity and the consequent strive for the abovementioned syntheses. Innovative formats for cooperation will not be an alternative to well-functioning, rule-based multilateral institutions, delivering public goods such as decisions with universal legitimacy and norms creating predictable and verifiable patterns of reciprocal action.¹⁵⁷ In future, these different forms of global governance – formal and informal, inclusive and exclusive, public and private or hybrid – will coexist. It remains to be seen whether different formats and frameworks will complement or undermine each other.

Effectiveness and legitimacy are the basic requirements for viable global governance frameworks, and the basic drivers of reform and innovation. The relationship between legitimacy and effectiveness is increasingly framed as a balance and not as a trade-off. Taking the long view, these issues should be unpacked: effectiveness is more than delivering quick fixes, and legitimacy is more than representation. In an increasingly interdependent and heterogeneous international system, resilience will be a key condition for effectiveness; and fairness will be a basic ingredient of legitimacy.

The effectiveness of global governance frameworks cannot be assessed with reference to individual institutions alone, but also to the connections and interplay between them. No individual institutional actor or single mini-lateral group of states is up to the task of successfully addressing complex challenges that escape their pre-defined competences, outweigh their resources and elude their political reach. For example, this is the predicament of international energy governance, which is fragmented into a number of formal or informal bodies that lack either inclusive membership or resources or both, and fail to properly work together.¹⁵⁸ The effective management of transnational challenges requires resilient *systems* of governance. These must be preventive, flexible, inclusive and, where relevant, binding. Importantly, they must cut across the divide between domestic

157. The EUISS and National Intelligence Council of the US, *Global Governance 2025: At a Critical Juncture* (Paris: EUISS/NIC, 2010).

158. N.K. Dubash and A. Florini, 'Mapping Global Energy Governance', *Global Policy* no. 2, Special Issue, September 2011.

and international affairs, since global challenges often require action at the national level, and developments within countries carry implications that spill beyond their borders.

Resilient systems are preventive, as the costs of economic, security, health or environmental disruptions largely outweigh those of effective anticipation. When countering transnational challenges, prevention starts at home. This emphasises the importance of networks of national and international officials and non-state actors that can monitor relevant benchmarks and risk factors and exchange information.¹⁵⁹ In particular, resilience will require effective triggers between early warning and early reaction at the political level. Resilient governance systems adapt to challenges. They therefore require in-built flexibility to fashion tailor-made responses in a timely manner. Permanent ‘nodes’ connecting different bodies and levels of governance will ensure relevant coordination and joined-up approaches upstream. Resilient systems benefit from the engagement of non-state actors as a constitutive component of decision-making and subsequent implementation at the national and transnational levels. In other words, the wider the basis of a governance system, and the stronger the sense of ownership by all relevant actors, the more resilient it will be. This feature of resilient global governance frameworks cuts across issues of effectiveness and legitimacy.

Legitimacy is a key asset for successful international cooperation. It has a procedural and a substantial dimension. Procedural legitimacy is about reducing the gap between rule-makers and rule-takers, whereby decisions taken by the few apply to the many. From this standpoint, for example, the critical issue of the size and composition of the UNSC will gain growing importance. The discrepancy between the current permanent membership of this body and the evolving balance of power and influence will only grow more glaring in the next twenty years. Were the issue to lose prominence, this would most likely be a signal of a decline in the authority of the UNSC. Such drift would open a serious security governance void at the core of the multilateral system. The latter could only be partially filled by informal great power clubs, whose legitimacy would be permanently questioned and whose durability would be highly uncertain, subject to the shock of successive crises.

Issues of procedural legitimacy in terms of representation also stand at the core of the reform of the international financial institutions (IFIs), where the inherited distribution of quotas and votes clashes with the new, and foreseen, balance of economic power. Recent reforms have narrowed the gap between power within and without the World Bank (WB) and notably the International Monetary Fund (IMF), enhancing the position of China,

159. A.M. Slaughter, *A New World Order* (Princeton and Oxford: Princeton University Press, 2004).

India and Brazil in particular. Part of the burden of these reforms in terms of shrinking shares has been borne by European countries. Most developing countries have not profited either, whereas the US has weathered the storm so far and preserved its veto power for key decisions in the IMF. The 2008 and 2010 reform packages are, however, only steps in what will likely be steady transfer of power to emerging Asia and other regions. Such process is, in itself, a condition for new economic powers to trust IFIs and mitigate self-insurance policies, such as foreign reserves accumulation.¹⁶⁰

Substantial legitimacy is a function of the degree to which proposals and outcomes reflect mutual interests and a fair balance of responsibility and rights between different countries and their citizens. Legitimacy as 'fairness' affects not just decision-making but also the content of international initiatives and collective decisions and their public justification.¹⁶¹ This is likely to be a critical dimension of legitimacy *and* effectiveness in the years ahead, as it involves issues of mutual interests, responsibility and consistency between domestic standards and external demands, as well as avoiding double standards on the international stage. Whether or not the considerable political gap between common challenges and action is filled, it will depend largely on the definition of mutual responsibilities (and corresponding rights) beyond the nation state, for example when it comes to upholding human rights or human security and protecting the environment.¹⁶²

Towards governance hubs?

Adapting governance mechanisms to complex challenges and the diffusion of power requires hybrid modes and channels of cooperation. The Global Fund to fight AIDS, tuberculosis and malaria, a successful public private partnership involving governments, civil society and business, points in this direction. The question for the future is not whether formal multilateral structures or informal multi-stakeholder initiatives are more effective but how to ensure consistency between different levels of cooperation, harness their comparative advantages and avoid the dispersion of scarce resources and political capital. This is chiefly a job for international institutions, operating as hubs of multiple governance networks. Their ability to perform this role will be a critical benchmark of their adaptability.

States do not become redundant by embedding their relations in the fabric of world politics; likewise, formal multilateral arrangements between states have a central, but not

160. G.T. Chin, 'Remaking the Architecture: The Emerging Powers, Self-Insuring and Regional Insulation', *International Affairs*, vol. 86, no. 3, 2010.

161. S. Weber and B.W. Jentleson, *The End of Arrogance: America in the Global Competition of Ideas* (Cambridge and London: Harvard University Press, 2010).

162. H. Altinay (ed.), *Global Civics: Responsibilities and Rights in an Interdependent World* (Washington D.C.: Brookings Institution Press, 2011).

exclusive, and often not decisive, role in the context of diffused governance systems. In the health sector, for instance, the World Health Organisation (WHO) operates through the Global Outbreak Alert and Response Network (GOARN), which involves officials and experts working in the field to detect and prevent the spread of contagious diseases. It also benefits from the massive support of philanthropic organisations like the Bill and Melinda Gates Foundation and of various countries for a number of flagship programmes; and from cooperation with other multilateral bodies such as the Food and Agriculture Organisation (FAO) and the International Labour Organisation (ILO). In this and other policy areas, the challenge is to integrate sprawling initiatives into a coherent framework and avoiding fragmentation or conflicting priorities.

The distinct experience of informal, mini-lateral groupings like the G7/8 and of the G20 suggests how multilateral institutions can evolve into governance hubs. Meetings among pivotal countries in informal groups are an increasingly salient feature of global governance. This trend is set to last, as it reflects the two basic drivers of change in the international system, namely the diffusion of power and deepening interdependence.

Informal leadership groupings fulfil five basic functions of growing relevance for the future of global governance: they engage Heads of State and Government in regular summits, strengthening their sense of ownership of the process and creating, at least in principle, the conditions for consistent follow-up of agreed guidelines and measures at the national level; they contribute to build trust among leaders and other top politicians such as finance and foreign ministers and senior officials through a process of multi-level consultation, which engenders a better understanding of respective backgrounds and positions; they allow for linkages among issues as they cut across the often rigid remits of formal international organisations (the G20 has mandated work on food security and price volatility, bridging issues of resource scarcity and market speculation, for instance); and they enhance shared awareness and a shared diagnosis of the challenges.

This requires the pooling of information from national sources through networks and multilateral bodies to establish a common platform of knowledge as a basis for decision-making. For example, the G20 has delegated the task of collecting data on the oil market to the International Energy Agency (IEA), the Organisation of the Petroleum Exporting Countries (OPEC) and the International Energy Forum (IEF), and has tasked the IMF with collecting information on national economic imbalances, with a view to reporting to summit meetings. Lastly, these groupings provide a flexible framework to reconcile the convergence of national policies and the formal autonomy of national decision-making.

The practice of the G7/8 and of the G20 over the last few years reveals a shift from what may be described as governance by clubs to governance by hubs. Governance by clubs puts the accent on exclusivity, informality and top-down guidance. These were the core features of the original G7. Small summit meetings of variable geometry will continue to be an important element of international politics and of cooperation to unlock political stalemate or to address sensitive issues in a confidential atmosphere. But when it comes to broader agenda-setting and to sustaining cooperation in a pluralist international system clubs will progressively give way to hubs.

In this context, the accent shifts from exclusivity to outreach and permeability; from informality to intensive preparation and capacity-building; from top-down guidance to a mix of direction from the top and bottom-up input and cooperation, involving a variety of networks and stakeholders; and from adopting more or less generic decisions at the international level to monitoring their implementation at the national level.

The evolution of the G7/8 and of the G20 reflects this trend. They have grown increasingly porous to the participation of non-member countries and institutions. Seven international organisations participated in the G20 Toronto and Seoul meetings and it has been agreed that each presidency will invite up to five countries to future summits. Thus, around thirty-three leaders sit around the table, although G20 members lead the discussions. Further, the South Korean Presidency has institutionalised the G20 business summit and has held the first G20 Civil Dialogue, gathering seventy civil society organisations from forty countries. The French Presidency in 2011 has put an accent on the social dimension of the G20 agenda. A summit of social partners has been held, the Director General of the International Labour Organisation has been invited to the leaders' summit and the creation of a G20 working group on youth employment envisaged.

The 'hub' quality of summits does not depend only, or even mainly, on numbers. Summit events represent the tipping point of the vast bulk of work carried out in the run-up to and in the aftermath of leaders' meetings. Sector-specific ministerial G20 meetings, working groups, networks of experts and officials and international organisations manage an increasingly complex agenda and report to summit meetings.

Informal groupings perform as hubs not only for setting agendas and benchmarks but also for cooperation on the implementation of decisions and guidelines at the national level. Where binding regulations and related commitments cannot be agreed, processes based on peer review and mutual assessment become an increasingly important dimension of international cooperation. The Mutual Assessment Process (MAP) – with was launched at the G20 Pittsburgh summit in 2009 within the Framework for Strong, Sus-

tainable and Balanced Growth and with the support of the IMF and other bodies – is a prominent example of this mode of cooperation. It reveals both the apparent limitations of open coordination, subject to the vagaries of political will at the national level, but also the potential of closer scrutiny of national policy via vertical networks of national and international officials, and of tighter benchmarks, in the presence of the political will to define and monitor them.

The G20 and other informal groupings at leaders' level will succeed or fail depending on their performance as hubs for consensus-building, catalysing complex agendas, overseeing the consistency of national policies, and spurring the reform of multilateral structures. The capacity of the G20 to connect with the broader international community of states will be yet another key requirement for the long-term sustainability and legitimacy of this format. The G172 of non-G20 countries will feel disconnected from the deliberations and conclusions of the summits if channels for engagement and consultation are inadequate. This is a condition for the G20 and other informal groupings to fully develop their status as hubs and contribute to bridging the governance gap and respond to the demands of global public opinion.



Part IV

**Greater uncertainty but
broader opportunities**



Conclusion

The world is undergoing a massive transition, particularly in terms of power, demographics, climate, urbanisation and technology. In this context, the opportunities are huge; but so are the uncertainties and challenges to the well-being of citizens. Transitions involve a much higher than usual level of uncertainty, so it becomes essential to invest in the study and monitoring of major trends.

The global trends identified in this report do not allow us to define with certainty how the world will look in 2030, as much will depend on unknown variables. The various trends identified are likely to be disrupted by unforeseen natural and man-made events, but will also be shaped by policy options that are in most cases unpredictable. One way in which policy makers can act is by formulating options to deal with current global trends that will have a lasting impact on the future of European citizens and citizens worldwide. Their future will be shaped not only by trends that are already visible today, but also by changes whose impact will depend on how societies respond to current challenges. The opportunities opened up by the trends identified in this report are enormous but so are the uncertainties and challenges to the well-being of citizens.

Convergence and fragmentation

Millions of individuals are coming out of poverty and becoming empowered, and there is increasing convergence around a sense of a common humanity. These are strong foundations for more just, democratic and prosperous societies and to reform democratic systems and global governance initiatives.

But an expectations gap is emerging because of the inability of governments to meet citizens' aspirations for a better life. This gap may become a source of revolt and despair. This era of convergence and greater relative peace may be followed by one of exacerbated nationalism if the expectations gap is not narrowed by national and global initiatives to deal with the pressing issues of fundamental rights and participation in the political process, poverty and inequality, climate change and scarcity, particularly water scarcity, and to institute mechanisms to ensure greater transparency.

Human development and scarcity

Economic growth will remain a major objective of emerging economies in their efforts to combat poverty and social injustice. Millions will rise out of poverty and become more empowered around the globe. Human development indicators will improve.

There is currently a broad consensus about how climate change will evolve and what some of its consequences will be, in particular with regard to water and food scarcity, but it is not certain what national and global responses will emerge to change the pace of global warming. There is today a quasi-global consensus that it is necessary to take decisive action regarding climate change in this decade if we are to prevent humanitarian disasters of unforeseen dimensions in the latter part of this century. How governments will react to this challenge is difficult to predict.

Awareness of the need to reduce dependence on fossil fuel energy sources and to invest in green technologies is well-established. However the pace of technological transformation is also difficult to predict and some new technologies merit more sustained in-depth study and committed investment strategies, given their potential impact on human development. This is the case with new alternative energy technologies and biotechnology.

Multilateralism and fragmentation

As the prospects for major interstate wars fade, a new ‘age of convergence’ seems possible, permitting deeper international cooperation to build a fairer, more secure and more prosperous world. But this ‘multilateral moment’ must not be lost, or a more polarised and fragmented system could emerge.

It is hard to predict in which direction the international system will evolve. Major uncertainties prevail about the future of global governance. It is unclear how the global economy may evolve, and what power shifts may follow from that. The multilateral agenda is likely to be shaped by a more heterogeneous and numerous set of actors than in the past, but it is unclear what responsibilities China, India and Brazil and other rising powers will take on.

It is also hard to know whether the US will lose its multilateral impetus under pressure from strong isolationist forces. It is also uncertain whether the EU will be able to address its structural problems and reform economic governance so as to renew its inner- and outward- looking capacities. A shift in trade and economic flows from the Atlantic to the Pacific may contribute to the relative marginalisation of the EU, but this scenario is not

inevitable; it depends largely on how the EU copes with the present economic crisis and uses its strengths to operate effectively in a polycentric world. If it rises to the challenge in a credible manner, the current crisis could be reversed by a new 'European renaissance.'. For the EU to do this successfully it must cultivate an 'open Europe' and resist the temptation to retreat into a 'Fortress Europe' under pressure from social segments that are fearful of external pressures.

The present trend is still for the US to take a leading role with the support of the EU, creating hubs of states, as exemplified by the G20 format, to deal more inclusively with global challenges, particularly economic and financial management. If the 'multilateral moment' endures, it may extend and refine a 'hub' system of global governance, which may then pave the way for a constitutional phase involving the reform of multilateral institutions. This would make it possible to integrate the newly-emerging powers into a more stable and consensual global system.

Monitoring the transition

The world, and Europe with it, is experiencing a period of transition, in particular of power, demographics, climate, urbanisation and technology. Transitions such as these involve a higher than usual level of uncertainty. Thus, it is crucial for governments and civil societies to invest in the study and monitoring of major trends. This report is an example of the kind of forward policy thinking that has become increasingly necessary in an uncertain world. The tracking of global trends is likely to increase worldwide; and it will be a fundamental aspect of Europe's ability to prepare and respond to coming challenges.



Annexes

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Abbreviations

3G	Global Governance Group
ADB	African Development Bank
AI	Amnesty International
ASEAN	Association of Southeast Asian Nations
ASR	Asia Sustainability Rating
BASIC	Brazil, South Africa, India and China
BRIC	Brazil, Russia, India and China
CBRN	Chemical, biological, radiological or nuclear weapons
CCP	Chinese Communist Party
CIVETS	Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa
CSR	Corporate social responsibility
DHS	Department of Homeland Security – US
ECOWAS	Economic Cooperation Organisation of West African States
EU	European Union
FAO	Food and Agriculture Organisation
GDP	Gross domestic product
GEM	G-20 Emerging Markets
GOARN	Global Outbreak Alert Response Network
HRW	Human Rights Watch
IBSA	India-Brazil-South Africa dialogue forum
ICT	Information and communications technology
IEA	International Energy Agency
IEF	International Energy Forum
IF	International Futures
ILO	International Labour Organisation
IMF	International Monetary Fund
IOC	Organisation of the Islamic Conference
IPU	International Parliamentary Union
MAP	Mutual Assessment Process
MDG	Millennium Development Goals
MENA	Middle East and North Africa
NAFTA	North American Free Trade Agreement
NAM	Non-aligned movement

NATO	North Atlantic Treaty Organisation
NCD	Non-communicable disease
NGO	Non-governmental organisation
NSA	National Security Agency – US
OECD	Organisation of Economic Cooperation and Development
OPEC	Organisation of the Petroleum Exporting Countries
PMC	Private military company
PMI	Private military industry
PPP	Public-private partnership/Purchasing power parity
PSI	Proliferation Security Initiative
R&D	Research and development
REM	Rare earth metals
RoW	Rest of World
SMEs	Small and medium enterprises
TNC	Transnational corporation
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNIFEM	United Nations Development Fund for Women
UNSC	United Nations Security Council
US	United States
USD	United States Dollars
WEF	World Economic Forum
WHO	World Health Organisation
WRG	Water Resources Group
WTO	World Trade Organisation

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