

Presentation by Anders Wijkman, co-president of the Club of Rome, at "Building resilience in a Globalised World" in Brussels Sept 30th, 2015:

An increasingly complex and vulnerable world:

We live in an increasingly complex world. A question often posed is whether we will be able in the future to manage and control the system. Wars and civil wars is one thing. But there are many other events – related to disasters, finance, the economy and technology developments – that show how vulnerable society has become.

Globalisation and an increasingly interconnected world is of course one of the many challenges. Georg Soros said in 1998: "We cannot have a global economy without a global society". This comment is more valid than ever.

It becomes increasingly challenging to align radically different economic, cultural and governance structures and get them to match, cooperate and embrace each other, i.e. traditional Arabic, authoritarian Chinese, nationalistic

Russian, corporate American and social market
European.

Disruptive technologies

Complexity will, if anything, increase as a result of a host of emerging new technologies. Many of them will significantly alter the business and social landscape. Some will disrupt status quo in a way that most of us cannot imagine.

Examples of such technologies are the Internet of Things, Advanced robotics, Automation of knowledge work, Autonomous vehicles, Energy storage, 3 D printing and Advanced materials. Technologies like IT, bio and nano are rapidly converging and will transform the world into something we have difficulties to comprehend.

No discussion about the future is meaningful unless it includes these technologies. They mean that we have already left industrial society behind and are moving into a new society – we may call it the knowledge society - characterized by a different logic.

Let me give me a few examples:

- Productivity growth is likely to increase significantly. How will it be harnessed? For private consumption alone or for the common good?
- Many new services will emerge at low or no cost at all; the whole notion of marginal cost will be turned upside down. The publishing houses and the music industry have already experienced what it means; the utilities in Europe are next in line.
- Economic growth no longer means a guarantee for new jobs. Jobless growth or a labor-light economy will be a fact of the future.
- The digital economy removes more jobs than it creates. We will experience increased global demand for highly skilled individuals, while competition for the still available low-grade jobs means wages will be pushed down and increase insecurity among many.
- Manufacturing is likely to take on new dimensions

- The new technologies offer great opportunities to enhance energy and material efficiency; but only if encouraged and steered to do so

Resilience vs Sustainability

We meet here to discuss resilience. There is a debate among scholars to what extent concepts like sustainability and resilience substitute or complement each other. To me they complement each other.

Sustainability is a more dynamic concept. It is transformative in nature. Many of the problems we are facing can in no way be solved by incremental change – something we have tried so far – but will require transformation.

Sustainability objectives are all the time challenged by short term considerations, often in the name of cost-efficiency. As the Volkswagen case shows, however, it can be extremely expensive not to take sustainability seriously.

Resilience on the other hand is more about adaptation and about robustness - so that a system can meet shocks and stressors in an effective way.

But the concepts are closely linked: For some problems we need transformation in order for resilience to be at all possible. Climate change is an example.

At any rate, we have to pursue both these objectives vigorously in tandem.

Sustainability – the long journey

Almost 30 years have passed since the launch of the Bruntland Report. The journey until now has had its achievements, but also its clear setbacks.

The awareness is much larger today about the many challenges we face. But the problems we face are far more serious and difficult than ever before.

One shortcoming is that the focus of the debate has been almost entirely on the environment dimension. Social issues have been sidelined. This means that in most parts of the world ordinary people have not really been included or involved. For them the social challenges in terms of food, water, shelter and employment are the main

challenges. Climate change or the destruction of the tropical forests may seem like distant issues.

The Bruntland report spoke about sustainability as a balancing act – between economic dev:t, social dev:t and the environment. This way of presenting the problem is too simplistic. To me a much better way would be to put

”Social sustainability at the core of the agenda – to be achieved within the planetary boundaries. The economy then becomes a tool box to make sure the other two objectives can be attained”.

But today, I am afraid, it is the other way around. The economy – and growth of the economy – is the overriding objective and the social and ecological consequences are considered more like incidentals.

The obsession with growth at all costs would be less of a problem if growth was assessed, not only from the point of view of volume or quantity but, as well, of quality. We have had years of studies and debates under the umbrella ”Beyond GDP”.

Progress has been made, new indicators have been developed, but the influence on policymaking has been minimal.

If we look more closely at sustainability – resilience being part of the agenda - let me share with you the most recent situation with regard to a few critical issues:

Climate change.

While progress has been made in the preparations for COP 21 – such as technology break-throughs, not least for solar, such as the cooperation agreement between the US and China and, for the EU and the US as well, that GHG emissions are a bit lower than before. Here a plea of caution is needed. While territorial emissions in some countries have been reduced, total emissions, if carbon embedded in imports is included, have gone up. My own country, Sweden, is a case in point. Territorial emissions are estimated to be around 6 tons CO₂e per capita. If we include consumption the emissions are way above 10 tons per capita. Still a long way to go.

In spite of some positive events the world is on track for at least 3,5° degrees of warming. The gap between the pledges made by governments and what it takes to not exceed the 2° degree target is huge. And the 2° degree target is, as we know, considered insufficient by many scientists. Moreover, when the 2° degree target is discussed, the conditions are such that the probability it will be reached is only 50 % or, at best, 66 %.

Let me share yet another piece of information: even if the GHG concentration levelled out at today's level – an extremely ambitious goal – the risk is almost 2 % that the world would experience 6° degrees warming before the end of this Century.

We rarely discuss climate change and risk in such terms – a huge mistake. If you compare the 2 % risk for a 6° degree warming with the risk of flying it would mean a risk that almost 2.000 airplanes a day would crash. No-one of us would accept such a risk.

I would add that we already experience serious consequences of a more unstable climate. Heat

spells, droughts, floods. The present crisis in Syria was preceded by a very serious drought. The situation in Syria is complex, but no doubt one of the contributing factors to large scale migration is climate change.

Let me share with you an experience I had the other day. I met with the well-known climate scientist Jim Hansen. Jim said that we have so far greatly underestimated the melting of glaciers and ices. These are non-linear processes and we "cannot rule out multi-meter sea level rise within four to five decades." If Jim is right, which I fear he is, the GHG emissions reductions now pledged for Paris are totally inadequate.

Ecological overshoot.

Already in 2005 the Global Ecosystem Assessment made clear that 2/3 of our most important ecosystems – soils, tropical forests, marine resources, freshwater and biodiversity - are overutilized. This can go on for a while but not indefinitely. It is like with money in the bank. If we take more than the interest the capital will soon be gone.

This is critical knowledge. Healthy ecosystems are the prerequisite for a healthy economy – and hence for welfare and wellbeing. Johan Rockström and a group of scientists have developed the framework of planetary boundaries (PB). They provide a frame within which to discuss and act upon serious threats to the biosphere and the atmosphere. The latest PB report shows that mankind has transgressed several of the boundaries. All our efforts must be geared at returning to what the scientists label as a safety zone. And we have to do that in a situation where populations and economies continue to grow – and add more pressure on those systems.

Resource depletion.

Global resource consumption is increasing rapidly. According to the International Resource Panel (IRP), the annual extraction of construction minerals grew by a factor of 34 during the 20th Century, ores and minerals by a factor of 27, fossil fuels by a factor of 12, biomass by a factor of almost 4, and total material extraction by a factor of 8. Parallel to that GHG emissions grew by a

factor of 13.

The role of the emerging economies is crucial. As an example: it is estimated that China used as much cement between 2010 and 2012 as the US during the 20th Century

Global resource use per capita is estimated to continue to rise. OECD counts on 1-3 Billion additional middle income consumers by 2050. Furthermore, an estimated 50% of the urban infrastructure that will be required in 2050 is yet to be built. The materials required for these investments are huge.

According to the IRP, resource extraction rates are expected to triple to around 140 billion tonnes globally by 2050 (based on a business as usual scenario). The anticipated increase in resource and energy-intensive extraction and production will, no doubt, be accompanied by ever increasing pressures on the climate and environment in general. But there are economic risks as well. A large portion of critical metals – not least rare earth metals – are imported into the EU. So security of supply is a risk factor. For some materials we will

face looming constraints. Not necessarily in the sense that we will run out of certain materials. But having already depleted the richest ores and the most easily extracted oil or coal deposits, future extraction will be characterized by higher costs, larger energy inputs and increasing pollution.

Jobless growth

I already referred to jobless growth. Several studies have already been made into the effects for the labor market by the digitization of the economy. I will not dwell into the details but it seems abundantly clear that many more jobs will disappear than will be created as a result of robotization and automation. This need not be a problem in the longer term. The 40-hour work week is not sacrosanct. But the way society is organised today – where both to make a living and one's social identity is linked to having a job – means that automation and robotization a real challenge.

Distribution of income

Yet another challenge is the widening income gap, within countries and in-between countries.

Increasing inequality is a moral problem and additionally a problem of social cohesion.

Inequality is a major issue for the sustainability – and, indeed, resilience discussion.

Financial overshoot

I will not dwell into the financial crisis and its aftermath. But speaking about resilience, the financial system feels far from resilient and robust. On the contrary. If someone would have said a few years ago that interest rates in many parts of the world today would be negative no-one would have believed this to happen. Moreover, the build-up of debts is continuing – not necessarily in the form of government debts. In my country Sweden the main concern is about rapidly increasing asset values – that is where most of the QE money goes – and rising debts among private households. When will the bubble burst?

*How then do we then adress all these problems?
How do we build resilience?*

Einstein once said "we can not solve the problems with the same thinking we used when we created them." How right.

Everything that happens around us speaks in favour of rethinking both policies and institutions. Some of the issues may appear ideological, but most are not. At any rate, we have to go beyond the tensions between the centre/right and the centre/left that characterized the industrial society. Very little of the logic of the industrial society is going to help us in the future. Moreover, in my view none of the parties or party groups of today provide the answers to the challenges of tomorrow. We are experencing a true crisis of party politics.

We have to go:

- from solving "one issue at a time" to adopting a more systemic approach.
- from linear thinking to circular thinking.

- from "working in silos" to fostering multi-and interdisciplinary and cross-sector cooperation.
- from a "take, make and dispose" model, based on linear resource flows, to taking nature into account
- from short-term maximisation to long-term optimization.
- from shareholder value to stakeholder value.

We need a new narrative. We need to help people understand the changes that are happening around us and also to realize that the way things worked in the past has limited relevance for the future.

We need new economic thinking. Companies and households must be rewarded for doing the right things. Some of the changes needed can be done within the present economic policy framework:

- like doing away with harmful subsidies,
- like internalising external costs,
- like substituting GDP for welfare indicators
- like lowering taxes on labor and increasing taxes on pollution and the use of nature etc

One particular avenue we should embark on is the circular economy – enhancing both energy and material efficiency. The present linear economic model – take, make and dispose of – is enormously wasteful and it results in increased pressure on natural resources and increasing pollution, including GHG. By moving towards a circular economy we would lower pollution in general, reduce carbon emissions, lower costs for both companies and consumers, improve material security and create many new jobs. Recent studies both by the Ellen MacArthur Foundation – “Growth within” - and the Club of Rome – the “Societal benefits of a circular economy” - show that convincingly.

What is of particular interest is that by moving towards a circular economy we would address economic, environment and social issues at the same time. Win- Win- Win! The reports referred to by the way will be presented at a workshop in the European Parliament on October 20.

Other issues, however, will require radically new thinking in order to:

- fully understand the relationship between the economy and the natural world; specifically that the economic system is part of the natural system and not the other way around
- move in earnest from a quantitative growth model to one emphasizing the quality of growth
- put a value on natural capital,
- rethink the discounting principle so as to make the system more long term,
- rethink institutions, not least the way science and education is organized
- rein in financial markets to again serving the real economy
- move from shareholder value to stakeholder value
- address jobless growth and the definition of work in the future
- address the ongoing trend of widening income gaps

Our value systems need to be worked on as well.

Both with regard to intergenerational equity, but as well, intragenerational equity and to our relationship with nature.

The agenda is challenging, to say the least. Some people say we need a major crisis – or several major crises - to bring about the necessary changes. I for one believe that "prevention is better than cure". I would hope we can establish a dialogue involving all major stakeholders and study the problems – or the problematique - together and broadly agree on a strategy forward.

Both Jac Jacometti and Walter Amman – in their contributions to the report for today's event - have made a plea for the European Commission to initiate a dialogue like the one I refer to. In Jacometti's words "trilateral collaboration", involving governments, legislators, the business sector and civil society. I think this is a good idea. We need to come out of the silos and work together. Only if we develop the means to meet the challenges will the future be bright.