

Royal Address on Sustainability ¹, The Hague, 5 September 2017 by Willem Ferwerda ²

Ladies and Gentlemen; partners in adversity,

I am honoured to have been asked to deliver this 'Royal Address' on Sustainability here in The Hague, the centre of the Dutch Government and Parliament.

As an ecologist and an entrepreneur, I am not here today to discuss climate change or sustainable technologies. I am here to address what I see as the core of all sustainability: recovering our relationship with nature, our ecosystems.

Concretely, I refer to the reversal of ecosystem degradation as the Most Important Task facing humanity in this century. Healthy ecosystems are the basis of our existence. We depend on them for our food, water, clean air, and climate stability; we depend on them for social and economic prosperity, for wellness and happiness. You would be hard pressed to find any issue of public debate that is not directly or indirectly related to our ecosystems and landscapes.

In other words, it is not possible to have a meaningful discussion on any such issue, - be it the quality and security of our food, our water, our air; about pollution and poverty, about the extinction of plant and animal species, extreme draught, flooding, safety, refugees and the climate, etc. – if we are not prepared to address the functioning of our ecosystems.

Broadly, it can be said that ecosystem degradation delivers us losses in four areas: loss of biodiversity, loss of employment, loss of economic development, and loss of perspective, purpose or meaning.

Making good on those losses, therefore, must begin with the restoration of our ecosystems. But, how do we do that?

As a Dutch citizen in the global community I have had the opportunity to forge connections in my area of expertise, 'ecology', with that which was necessary to develop as a human being, for which I thank my country's prosperity and strong economy. Ecology and Economics. The word 'eco' is derived from the Old Greek word 'oikos', meaning house or, our planet. So if you can summarize ecology as the knowledge of the house, we could define Economics as the knowledge of 'book keeping of our house'. Unfortunately, our planetary bookkeeping and our knowledge have started going their separate ways, centuries ago.

We have, in the previous century, with great zest, accumulated mostly financial capital, at the expense of social and natural capital. This has produced what is known as an 'overshoot', where, at some point during the 1980s, we have started over-consuming our world's natural capital. Fortunately, thanks to the public debate on climate change, the world is waking up. This development bears hope and it has led to the 2015 climate agreement which, for the first time in history, has identified forests and other ecosystems, like peatlands, as capable of absorbing CO₂.

That said, we're seeing the predominance of technology and climate debating drawing the public eye to mostly technical solutions- electric cars, energy projects, and so on- at peril of developing a broader, holistic view, and many have stranded in the sustainability debate.

This is where ecology must come to the fore, and deliver its worth to society. Ecology is a complex science, rooted in systemic thinking, which deals with species' mutual relationships and interactive functioning with the environment.

As ecologists, it was our task to bring the story to the public ear, and we haven't been very successful. We're seeing the results of that reflected in the sustainability movement, in the discussion on the future of our landscapes, in the kaffuffles between conservationists, farmers and fishermen, in the never-ending debate about why nature conservation is important, and in the omission of nature as an effective buffer for absorbing CO₂. On the same line, we have seen systemic thinking and ecology shoved into the bottom drawers in our education institutes. Recently a student of business administration asked me to explain the relationship between plants and climate change. To this young person, the notion of ecology and photosynthesis being capable of delivering a significant contribution to the problem was an eye-opener.

What we need in the sustainability debate, now more than ever, is a mind-set that looks at the whole. This is where ecology comes in, since it compels one, not only to peruse the individual system parts but also to examine how they interact, and to identify their precise role and place in the big picture. We must learn to zoom out and in.

Over the past decades I have witnessed the degradation of nature unfolding at a dazzling pace. Flying over the rain forests of South America I have seen, first hand, large tracts of forests transformed into 'fishbone' landscapes, with the initial inroad growing more and more 'branches' for timber extraction, mining and oil exploration, and finally, the clearing of vast tracts of land for commercial pursuits such as soy, oil palm and corn. I have seen literally millions of hectares of rain forest,

¹ The Royal Address on Sustainability is a speech held every year to Dutch Parliamentarians, journalists and public at the Parliament in The Hague, given by the number one of the Dutch 100 Sustainability List.

² CEO and founder Commonland; Executive Fellow Business & Ecosystems Rotterdam School of Management – Erasmus University; theme leader business and ecosystem management IUCN Commission on Ecosystem Management (CH).

home to a diversity of flora and fauna, transmuted into green deserts, then into arid, man-made plains where wind and water rule the day. And I am not even touching on the tragedy of this onslaught for the indigenous populations. This has been merely 'business as usual', and it continues as we speak. Only last month, the Brazilian president pushed for releasing a protected rainforest larger than the Netherlands on behalf of mining and investment interests.

According to the World Resources Institute, a total 2 billion hectares of landscape is degraded, this is an area the size of the United States and China combined. Degraded, meaning that the land is no longer considered capable of delivering vital ecological functions such as food production, water, and liveable conditions for humans, due to deforestation, over-intensive grazing, and soil erosion. *Ecosystem degradation is the true global crisis and it touches our existence to the core. It is the Next Big Thing!*

And, it's not new. Ever since the publication of the 1972 report from the Club of Rome, *Limits to Growth*, we have known that our economies are built on quick-sand, and that they rely on the exploitation of nature and landscape. Countless publications since have confirmed this. What is new, however, is that the message has finally reached our industries and governments- courtesy the climate change debate. Within the context of '[Global Land Outlook](#)', a UN report that was launched in September in China at the 'Conference of the Parties', CoP13 of the UNCCD, the UN Convention to Combat Desertification the Netherlands Environment Planning Bureau recently reported on the decline of land quality, while the demand for arable land was rising. This trend mostly affects countries battling water crises and population pressures, specifically the Mediterranean, Middle East, Africa and Southern Asia. Population growth, higher living standards and healthcare are expected to exponentially increase the demand for food, water and bio fuels. Moreover, and I quote the Environment Planning Bureau: "it is not feasible to expect that those needs could be met by deploying traditional solutions, i.e. technology and artificial fertilizers". A G8 study published as TEEB³, '[The Economics on Ecosystems and Biodiversity](#)', had previously pointed out that the present structure of our farming industry accounted for 70% of biodiversity loss and that it was the no. 1 cause of landscape degradation.

That farming has been and still is responsible for causing degradation and climate change is something we've known for some time. In the Netherlands, farming industries account for some 20% of the total amount of emissions and greenhouse gases. Dehydration of the well known green peat meadows is responsible for approx. 2-3 % of CO2 emissions in the Netherlands. It may not sound much, but these 'natural' CO2 emissions still equate to the combined emissions released by some two million passenger cars, roughly 20% of all passenger cars registered in the Netherlands. In other words, unless we adapt our farming models, expect more of the same. And it is not just a Dutch problem. Hand in hand with the agricultural industries and the farmers, we will have to find solutions by combining biodiversity recovery, CO2 soil storage, intensification and in part, 'de-intensification', new varieties and where appropriate, older varieties and technologies. *A healthy economy is built on healthy ecosystems.*

The awareness that nature, such as wetlands and mangroves - represents enormous value was driven home by disasters like the 2004 Tsunami in South-East Asia, and hurricanes Katrina and Sandy in the US. It is sad to watch that with the disaster of hurricane Harvey in Texas, so little has changed, reflecting the vision in the US where areas are simply rebuilt as if nothing had happened. The human dimension aside, we are looking at enormous economic losses largely due to the removal of natural buffers, such as wetlands. In the aftermath of Hurricane Harvey the material losses are estimated at US 150 billion and that figure is expected to rise. Based on very conservative estimates TEEB projects the loss of nature, worldwide, in the year 2008, at around US 72 trillion. This is on a par with the amount of money earned in the same year, with a Gross Global Product of around US 76 trillion. By comparison the combined outlay of governments, NGOs and businesses towards biodiversity conservation and recovery in that year was a mere US 21 billion. A band-aid. *It is time we give back to nature what is owed, with abundance. And fortunately, there is a bright light approaching.*

More and more people are starting to glean the big picture, and how the world's problems are interrelated. Soil erosion, refugee waves, economic implosion, population explosion, the growing gap between rich and poor, geopolitical tensions. Everything, everything is connected. It is now time to review the sustainability issue from a holistic perspective, based on systemic thinking. It is time to embrace our ecosystems crisis both as a challenge and an opportunity, to demonstrate a long-term view of the global economy, at a scale humanity has not witnessed. I propose, for your sincerest consideration, what I have dubbed and is already used by many international colleagues, the '**Restoration Economy**'. That is, an economy

³ The Economics of Ecosystems and Biodiversity (TEEB) is a global initiative focused on "making nature's values visible".

that is not a little less bad than the one we have, but an economy in which restoration of ecologic functions is featured front and centre. So, you could say: a Circular Economy PLUS.

The principal feature and hallmark of the 'economy of restoration' is that it will bring together *knowledge, experience, and interests*, ultimately with a view to returning a profit on successful recovery of ecologic functions. Think of building with nature, planting (native) trees, wetlands restoration by e.g. insurance companies (think about Harvey!), regenerative agriculture, planning and up-scaling protected regions that function as ecologic corridors, removing plastic debris from the world's oceans, small-scale planting, for example, on rooftops, developing natural cityscapes, and so on. Second, the various parties that the restoration economy brings together will start to see the larger picture, within their own local situation. This is about the ability to 'zoom out to see the big picture, and zooming in to place an activity in the local perspective.

This demands a different form of leadership, soundly based on a long-term view, and a commitment to the common good.

From where I stand, it is fascinating to see the 'restoration economy' taking form, with new earning models being developed in some countries, of necessity, and more often from individual initiatives. In the Loess plateau in Central China, for example, mass tree planting and erosion-countering measures have seen a region the size of Belgium restored within 20 years, where farming revenues have now tripled with quality produce like apples while significantly improving living standards for some 2.5 million people. Similar such developments are taking place in India, Ethiopia and Rwanda.

Yet another inspiring example is the Egyptian company **Sekem**. Over a 40 year timeframe this company has transformed what was once a barren overgrazed desert into a flourishing farming industry where employees having access to education, healthcare and social assistance.

In Java, Indonesia, parts of the coastline have receded due to the felling of mangroves and subsidence. Traditional, hard engineering solutions like groynes and breakwaters were ineffective. **ECOSHAPE**, a Dutch-Indonesian partnership, are working to restore the coastline with the 'Building with Nature' principle, for example, by replanting mangroves, which also boosts the fish population.

Similar initiatives are undertaken in the Netherlands.

Circular Friesland seeks to improve production-tired pastoral land, void of biodiversity, by restoring those 'green deserts' to a variety-rich, resilient, and attractive landscape, in the process increasing economic productivity with a mix of business activities supported by long term planning in the northern territories of the Netherlands. In the province of Zuid-Holland province there is an initiative called '**Green Circles**', a partnership whereby the business community, residents and local governments work together to develop solutions for issues affecting the landscape. Water storage, for instance, is being combined with dairy farming and biodiversity, and bee landscapes are constructed around industrial areas. In the financial sector, much is happening also. The so-called 'Impact Funds' are increasing in numbers and increasingly are delivering good financial returns. The concept of 'systemic responsibility' has hit the sector and is heard more often. Younger professionals, under 35 years – the so-called 'Millennials' – who refuse to be associated with investments that harm the planet, are the driving force here.

The first investment funds for ecosystem recovery are under construction. One such initiative is the 'Land Degradation Neutrality Fund', an investment fund that was launched under the United Nations banner of the UNCCD.

These are the first, hopeful steps towards moving from a degradation economy to a restoration economy- the economy of the future.

But, it needs to happen faster, and on a massive scale.

During the many discussions I have had with farmers, impact investors and CEO's, I have grown the hope that we will see the restoration economy unfolding worldwide, on an unprecedented scale.

We have the know-how, we have the funds, and the awareness is steadily awakening.

It is an awareness that inspires a deep longing, along with the realisation that Mother Nature is holding up a mirror. I am reminded of the Indian farmer who once told me, when asked how come his land looked so prosperous compared to the barren plains around him: '*When I realised that restoring my soil was restoring my soul, I started doing agriculture in a different way*'.

In order for the recovery to happen at a significantly larger scale of economy, it is essential to form long-term partnerships. What is needed here is a facilitating, neutral party, who approaches the interests of the many parties involved from an overall view and supports the learning process (zooming in and out).

It is here, that the Netherlands can play a unique role. The Netherlands is fully equipped to play a leading and steering role in any developing restoration economy. It can rely and rest on extensive know how and expertise of integrated system approaches, based on proven core qualities in the areas of ecology, water management, agriculture and food production. A role, also, that could deliver important added value in the pillars that I have identified as the '4 returns'. After all, there is a bright lining: whereas the degradation of the world's ecosystems has delivered a four-fold loss; ecosystems recovery, which restores life and soul energy, holds many new ways and fresh inspiration for the future of the planet. It not only addresses the ecology of the land, it is equally concerned with revitalising communities and local economies. Long term landscape planning, based on sustainable business cases, can transform the above mentioned four losses, into 4 'returns', or four areas of profitability, namely 1) inspiration and meaning reclaimed – ('conscious capital', applied for the benefit of people and planet – 2) social capital, 3) natural capital and 4) sustainable financial capital.

And this is taking place, today. A fast growing number of impact investors and philanthropists are making financial capital available for the purpose of creating natural and social capital. If successful, financial returns will follow as a matter of course. To restore those billions of hectares of degraded soil, we do, also, need a political and economic offensive, to put the restoration campaign on the map. A commitment at this level is necessary to generate the hope and confidence that attracts business people and investors. My concrete proposal and challenge to you, today, is as follows.

1. With your government, prepare a long-term agenda for a restoration economy, together with your Economic Affairs, Foreign Affairs, Infrastructure & Environment and Finance Secretaries.
2. Set up a national investment fund with at least EUR 1 billion floor level, sufficient to build an experience base with regenerative productive landscapes, which, typically will include the farmers as managers & restorers of our ecosystems, as part of an integrated solution offering robust earning models with good perspectives. We must listen to our farmers, and we must do what we can to allow them to take their rightful places as stewards of our fertile soils and bio diversity. A good product, always, is the result of a chain of respect.
3. Prepare climate legislation that puts a price on CO2 emissions and contributes to ecosystem restoration, both in your own country and elsewhere.
4. Support ecology awareness at all levels of education, from primary to business school. Looking ahead, we are going to need professionals who are capable of identifying connections and trained in long-term planning and forward thinking.
5. Finally, I propose a top sector in 'ecosystem management', whose first and foremost mission is to develop a comprehensive ecosystem restoration program in the Middle East in which a re-greening, regenerative farming, social employment programmes for people including refugees are the cornerstones in establishing sustainable peace.

We need to restore our earth - our life support system - and as entrepreneurs, corporations, journalists, scientists, politicians and citizens, we have the task of telling this Big Story to the World. We must hear those who are living in the rural areas, concerns: farmers, fishermen, local and rural businesses. They often have answers, but were mostly not heard. Over time they have seen their roles reduced to producer, at the expense of fulfilling their tasks as stewards. Here I remember the words of French farmer, saying: a good product is a complete chain of respect. Technology is a magnificent tool, but it cannot save us. That we have to do for ourselves. Knowing that real solutions are based in an acknowledgement of our own responsibilities and impact. To quote the American author, Richard Heinberg: *"Machines won't make the key choices that will set us on a sustainable path. Systemic change driven by moral awakening: it's not just our last hope; it's the only real hope we've ever had"*. Let us make this profound insight work for us. Let's get to work, as a global community, and restore nature with new, effective business cases.

It is time to realize: it's in our own interest. And there is no time to lose.

Thank you for your attention.

The Hague, The Netherlands, 5 September 2017,
Willem Ferwerda