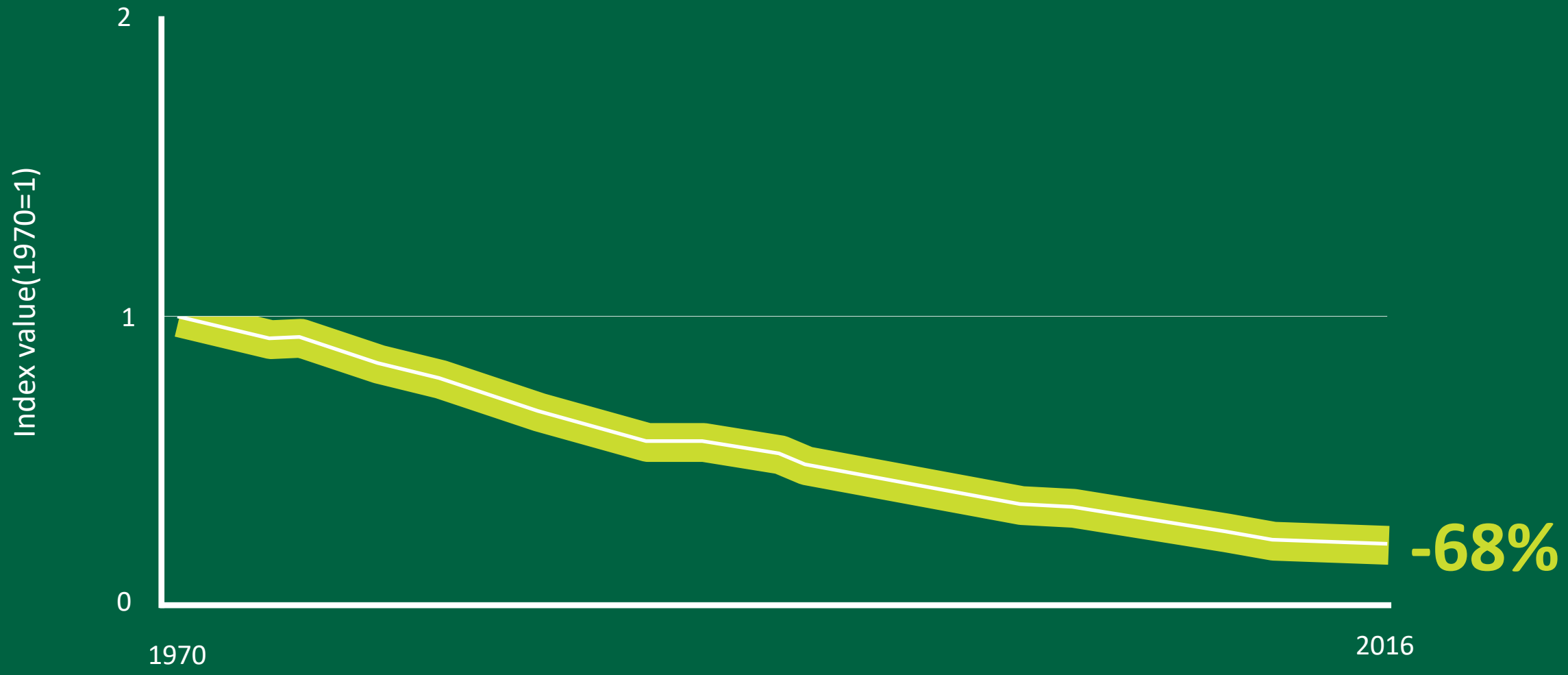

# 2021: TIME FOR ACTION

## John Hudson

# Our relationship with nature is broken

# 2020 Global Living Planet Index

Source: WWF/ZSL (2020)



# SA in Context: CO 2 vs the World


**SA comparatively at 0.7 $kgCO_2$/GDP**

# OUR PURPOSE

‘To use our financial expertise to do good for individuals, families, businesses and society’

SDGs agreed on by 193 governments & supported by 1000s of companies worldwide

In Africa alone there is at least **US$1.1 trillion** in business savings & revenue


SUSTAINABLE DEVELOPMENT FINANCE
15 LIFE ON LAND
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
8 DECENT WORK AND ECONOMIC GROWTH
10 REDUCED INEQUALITIES
4 QUALITY EDUCATION


OPERATIONS
14 LIFE BELOW WATER
10 REDUCED INEQUALITIES
13 CLIMATE ACTION
5 GENDER EQUALITY
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
CSI
3 GOOD HEALTH AND WELL-BEING
1 NO POVERTY
4 QUALITY EDUCATION
14 LIFE BELOW WATER
2 ZERO HUNGER
SUSTAINABLE DEVELOPMENT FINANCE
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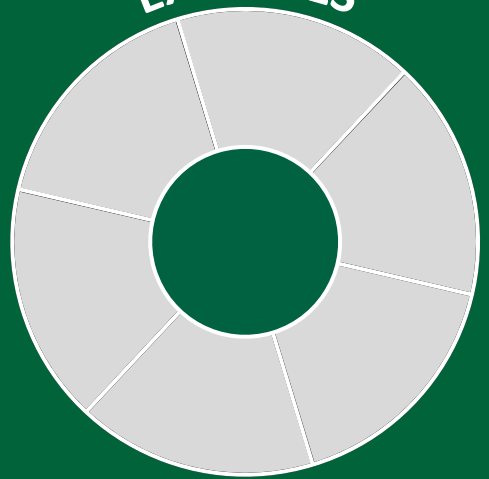
CSI SPEND

R0,124bn

EXPENSES



R30bn

NEW ADVANCES

R180bn

# Role of Partnerships

WWF

WORKING TOGETHER TO SAFEGUARD SOUTH AFRICA'S WATER SOURCE AREAS, IMPROVE RURAL LIVELIHOODS AND PROMOTE LAND STEWARDSHIP

NEDBANK

# Adopting a holistic approach to sustainability

- Climate change is now regarded as one of the top risks currently facing farmers, making farming far less predictable and more challenging than ever before.
- The focus then should therefore be on mitigating business risk with the goal being long term financial sustainability.
- Renewable Energy is one consideration when building a resilient farm business and other aspects such as water, soil health, food waste, bio diversity and recycling all form part of the mix.
- Nedbank has innovative and tailored funding solutions to support farmers with sustainable farming interventions where our approach is to understand the unique circumstances applicable and to craft an appropriate solution.

**Renewable Energy ("RE")**

An energy source that renews itself without effort. Fossil fuels, once consumed, are gone forever, while solar energy is renewable in that the sun energy we harvest today has no effect on the sun energy we can harvest tomorrow.

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| Life Cycle Stages | Upstream Processes | Operational Processes | Downstream Processes |
|---|---|---|---|
| **Photovoltaics (PV)** | | | |
|  ~40 g $CO_2$eq/kWh | • Raw Materials Extraction<br>• Materials Production<br>• Module Manufacture<br>• System/Plant Component Manufacture<br>• Installation/Plant Construction | • Power Generation<br>• System/Plant Operation and Maintenance | • System/Plant Decommissioning<br>• Disposal |
| | ~60% - 70% | ~21% - 26% | ~5% - 20% |
| **Coal** | | | |
|  ~1,000 g $CO_2$eq/kWh | • Raw Materials Extraction<br>• Construction Materials Manufacture<br>• Power Plant Construction | • Coal Mining<br>• Coal Preparation<br>• Coal Transport<br>• Coal Combustion<br>• Power Plant Operation and Maintenance | • Power Plant Decommissioning<br>• Waste Disposal<br>• Coal Mine Land Rehabilitation |
| | <1% | >98% | <1% |

Source: *Burkhardt et al. (2012) and Whitaker et al. (2012) Photos from iStock/19291390 and iStock/1627655, Top (left to right): Photo from iStock/13737597, NREL/PIX 18553, iStock/12123595, NREL/PIX 16933, NREL/PIX 18968, NREL/PIX 19163*

## LCA of Energy Systems

LCA can help determine environmental burdens from "cradle to grave" and facilitate comparisons of energy technologies. Comparing life cycle stages and proportions of GHG emissions from each stage for PV and coal shows that, for coal-fired power plants, fuel combustion during operation emits the vast majority of GHGs. For PV power plants, the majority of GHG emissions are upstream of operation in materials and module manufacturing.

# Considerations before going Solar

- South Africa has been plagued by power supply issues for many years and with electricity tariffs increasing by 15% businesses margins are under pressure. According to the World Economic Forum (WEF) Energy Transition Index 2021, the rising electricity price is one of the major contributing factors placing South Africa near the bottom of the list, at 110 out of 115 countries.

**BUT**

- Energy demand does not always follow the sunshine cycle.
- Managing the energy demand and being more energy efficient is crucial before installing systems that generate alternative energy
- Evaluate the risk and do the sums – the best time to consider moving your business off the grid is when you see there is a significant energy security issue. That is if lost production and operations far outweigh the cost of going off grid or installing a hybrid̄ solution.
- Ultimately, farming businesses need to manage their electricity demand, be more energy efficient and generate only as much electricity as they can use every day.
- Examples – grid tie (citrus and mushroom farm) and off grid (extensive beef).

# FINANCING SUSTAINABLE SOLUTIONS

Innovative finance solutions for sustainability that enable you to achieve the lifestyle and business outcomes you desire.

The greatest contribution a bank can make to the sustainable-development agenda is through its commercial offering. This includes the creation of innovative products and services as well as finance and investment solutions that enable clients to achieve the lifestyle and business outcomes they desire.

see money differently

## AFFORDABLE AND CLEAN ENERGY

**The ability to generate sufficient clean energy for own use, reduce energy consumption and maintain business operations.**

### AS A CLIENT, YOU:

- have the potential to sell surplus electricity to the grid, resulting in cost reduction and/or revenue generation;
- can mitigate the impact of rising energy costs, save over the long run and benefit from 'free' electricity after repayment;
- can mitigate the impact of power interruptions and therefore maintain production, service delivery and working conditions;
- can maintain income generation for both your business and the employees and maintain employment standards; and
- contribute to making a positive impact on the environment.

### BENEFITS AND INCENTIVES:

- You are able to finance sustainability initiatives through Nedbank.
- We offer longer repayment terms and competitive pricing, making it easier for you to afford becoming more sustainable.
- You may qualify for certain tax incentives.

### EQUIPMENT WE FINANCE:

- Photovoltaic (PV) panels.
- Solar concentrator (heat equipment).
- Biomass equipment.
- Wind turbines.
- Hydro electricity equipment.
- Other proven energy hardware solutions.
- Verifiable energy efficiency equipment that produces savings.

Our offering

# INNOVATIVE INDUSTRY SOLUTIONS AND PARTNERSHIPS

Nedbank AgriBusiness has specialised agricultural teams that understand local conditions and business situation better than anyone else. They ensure decisions are made quickly and that industry enjoys expertise from a dedicated business manager and cost-effective solutions, tailored for every segment.

We realise that, as agribusiness grows, our clients need specific solutions structured to their unique needs. The adoption of innovation and technology in agriculture is gaining momentum as the sector looks for solutions to both improve productivity and to ensure the sustainability of any operation.

**Shade-netting financing** is perfect for field and tree crop farmers to help improve the yield of underperforming orchards and protect them from natural hazards while saving water, reducing fertiliser application and preventing cross-pollination at the same time.

**Renewable energy and efficiencies m**itigate the impact of load-shedding and rising energy costs. Various renewable-energy finance options can be tailored to our clients needs, with extended repayment terms of up to 10 years on business loans.

**Sustainable agriculture transformation,** Nedbank can help with the expertise, advice, technical assistance and finance solutions needed


*Continued emission of GHGs will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks.*

**SPM 2 (IPCC AR5)**

**UNLESS SOMEONE LIKE YOU (AND US) CARES A WHOLE AWFUL LOT, NOTHING IS GOING TO GET BETTER. IT'S NOT."**