

GREEN SKILLS



THE GREEN SKILLS PROGRAMME

Coordinated by the Environmental Learning Research Centre at Rhodes University and the Centre for Researching Education and Labor at Wits University, South Africa, in partnership with UCT, WWF, the Department of Environment Affairs, Department of Higher Education and Training, and Sector Education and Training Authorities (SETAs).

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green skills
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WHAT DOES SOUTH AFRICA NEED?

REALISING THE 2030 VISION

The National Development Plan <https://www.gov.za/issues/national-development-plan-2030> states that by 2030, South Africa's transition to an environmentally sustainable, climate-change resilient, low-carbon economy and just society must be well under way. Chapter 5 of the NDP deals with the wise management of our natural resources and emphasises skills development.

Medium Term Strategic Framework <https://www.dpme.gov.za>

Outcome 10 of the MTSF calls for our environmental assets and natural resources to be enhanced and protected, and for a well-managed, just transition to an environmentally sustainable economy. This in turn requires Outcome 5: A skilled and capable work force.

RETHINKING ECONOMICS FOR PEOPLE AND PLANET

Green Work and Sustainable Development

The same actions help people and planet. Reducing food waste, e.g., means less hunger but also less land to plough and water to pump. To make this possible, price and profit models need to change. Radically re-thinking current practices means new ways to create well-being, through circular economies, renewable energy, redesigning basic services like sanitation, and restoring productive ecosystems. A fair distribution of benefits, less greed and less desperation mean less harm.

Innovation to include Eco-Technologies

A sixth wave of innovation is predicted to include technology to improve environment and health. Think safe water-less sanitation; circular food production processes; bio-degradable packaging; renewable energy storage; hydro-fuel cells; electric vehicles and more.

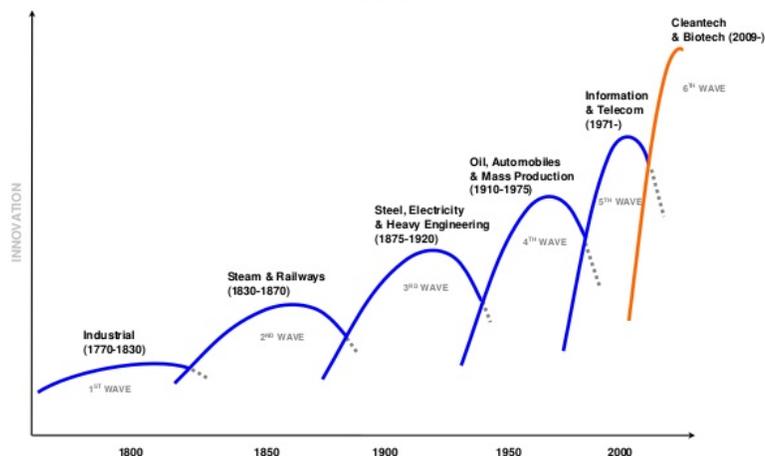


Figure 1: Six Waves of Innovation (DONG Energy, 2009, based on Perez, 2002 and Merrill Lynch, 2008)

FURTHER READING

Lotz-Sisitka, H., Ramsarup, P., Bolton, H. (2017) Researching sustainable development pathways towards progression in learning and work. (2017) *SAQA Bulletin*, 17(1), pp.1-26

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Ramsarup, P., Ward, M., Rosenberg, E., Jenkin, N., Lotz-Sisitka, H. (2017) *Enabling Green Skills: Pathways to Sustainable Development. A Source Book to Support Skills Planning for Green Economies*. Department of Environmental Affairs, Pretoria.

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To participate in a global green economy, and to make eco-innovations work for each village, city, school, college and university in South Africa – we need green work and green skills across the four inter-linked realms of the economy (Raworth, 2017): in markets, households, governance, and the commons (including air, water, oceans and soils).

RESEARCHING GREEN SKILLS

Green technologies, designs and processes are new, and new risks and opportunities emerge all the time, so employers cannot easily predict green skills needs. Skills required in one industry may have to be developed in other sectors; this complicates sector-based planning.

In the Green Skills Programme we use a laminar, transitioning systems model for research that iteratively identifies and analyses drivers of green skills demand; provisioning and pathways challenges; and absences/gaps, at macro, meso and micro levels (see Figure 2).

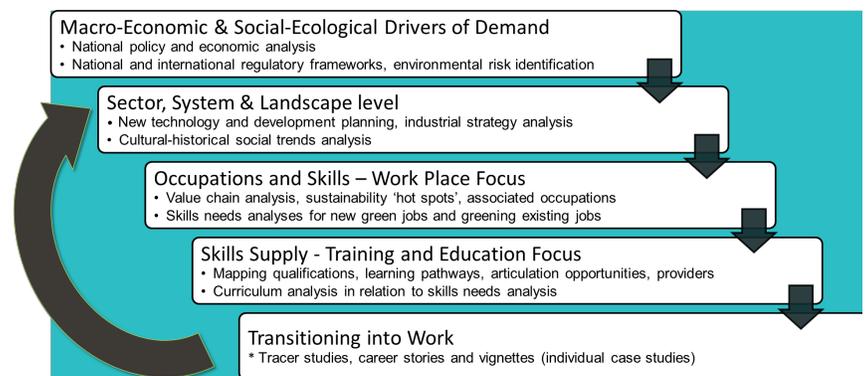


Figure 2: The Green Skills Programme's Demand Determination Method

We have applied this method to analyse and extend value chains in Agriculture; Banking; the Chemicals Industry; Mining; Public Procurement and more. These studies have shown that *green skills are needed throughout the value chains*, among different actors and occupations who need to work together, often across sectors. Multi-criterion analyses are then needed to prioritize among these multiple green skills needs, so as to invest strategically in those skills most likely to achieve social, ecological and economic benefits.

GREEN OCCUPATIONS ACROSS EXTENDED VALUE CHAINS

