



SYNTHESIS REPORT JUNE 2021

Biodiversity Human Capital Development Strategy Mid-Term Review 2020-2021

Commissioned by The Lewis Foundation and The
South African National Biodiversity Institute (SANBI)

Review Team:

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EXECUTIVE SUMMARY

Purpose and Process followed for the Review

The Biodiversity Human Capital Development Strategy (2010-2030) aims to drive a systemic approach to developing skills for biodiversity and transformation, in pursuit of *‘a socially equitable and suitably skilled workforce of biodiversity leaders, professionals and technicians to optimally implement the sector’s expanding and increasingly complex mandate’*¹.

This vision is being pursued through four strategic goals, viz.

- To increase the number of talented black South Africans *attracted* to working in the sector
- To improve the *quality, levels and relevance*² of skills for the sector
- To improve the *retention and effective deployment* of suitable individuals in the sector
- To create *enabling macro-conditions* for skills planning, development and evaluation.

The Biodiversity Human Capital Development Strategy is a response to Strategic Objective 2 of the National Biodiversity Framework (2007), which called for a national strategy to address transformation and scarce skills, and remains a priority in *South Africa’s Second National Biodiversity Strategy and Action Plan 2015-2025* (DEA, 2015). Its development was initiated by the South African National Biodiversity Institute (SANBI) with a core funder, the Lewis Foundation (www.thelewisfoundation.co.za), and several implementation leads and partners in the broadly defined biodiversity sector. In 2019 a group of sector organisations proposed a mid-term review for the implementation of the BHCDS and set up a steering committee for the review. The Terms of Reference were compiled by the steering committee in September 2019, following which a call was put out for a team to undertake the review. The Environmental Learning Research Centre (ELRC) at Rhodes University submitted a proposal in response to the call, which was accepted. The review was undertaken during 2020-2021 using a strategy evaluation methodology approved by the steering committee, and both primary and secondary data. Methods consisted of key stakeholder interviews, a broader employer survey, analysis of skills supply and financial data, a stakeholder analysis, and case studies of implementation programmes. Several existing evaluations were utilised including two GreenMatter evaluation reports. The review aims to inform the further implementation of the strategy in the next 10 years, and to renew and expand commitment to biodiversity skills and transformation among relevant organisations, through stakeholder participation. Hence the review outcomes have been discussed and the recommendations further developed with stakeholders at a Mini Environmental Skills Summit in March 2021, to shape future priorities, and potentially revising implementation structures.

Draft reports took the form of a report-and-respond instrument, which creates space for stakeholders to write into the report, to provide consenting or dissenting views and further details. These inputs were taken into account in the finalisation of the report, which also

¹ *A Human Capital Development Strategy for the Biodiversity Sector 2010-2030*, SANBI and the Lewis Foundation, 2010, p.52.

include the Summit outcomes. Although not all views might be captured, we believe that the best available information was used to construct the report.

The Executive Summary provides a high-level view into findings aligned to the seven strategic objectives of the Strategy, and recommendations. Readers are referred to the body of the report and appendices for details and elaboration.

Findings

Overall Finding: More is needed and gaps exist

The implementation of the Biodiversity Human Capital Development Strategy (BHCDS) involved a significant amount of activity and inputs, was generally aligned with the strategic objectives and principles of the strategy, and achieved significant outcomes. However, stakeholders were of a view that *not enough* had been achieved, that scarce skills and transformation challenges remain, and that (for the most part) the BHCDS was still relevant for achieving them. The implementation architecture had both strengths and weaknesses, but implementation had been held back by inadequate monitoring and evaluation, principal-agency disconnects, the lack of a steering committee and advisory group, and irregular sector-wide events to optimise synergies, grow the level of participation from a wider range of partners, and maintain momentum over the 10-year period.

Specific findings are presented below in a high level ‘dashboard’ format, in which *Green* indicates *Well achieved*; *Orange* indicates *Somewhat achieved*; and *Red* indicates *Not adequately achieved*.

Finding 1: Biodiversity as a study and work choice has been promoted to young black South Africans and access into higher education studies has significantly increased

Strategic Objective 1 of the BHCDS addresses the promotion of the sector among young people and skills system leaders in order to attract and give skilled black South Africans access into biodiversity organisations.

Strategic Intent: Promote the biodiversity sector as a sector with a strong vision of transformation and opportunities for fulfilling work that contributes to the national development agenda, among the following groups ...

Black South African school leavers, students and graduates

Fundisa for Change programme engaging teachers and teacher educators; GreenMatter Fellowships; Imvelisi Enviropreneurs project; NRF and CATHSSETA bursaries; WWF and other internships; university & schools career guidance (WWF, SANBI and DEFF along with others and links into DHET’s NCAP) engaging young black South Africans, Groen Sebenza involving 47 partners and nearly 800 placements. HEMIS data show increase in black students in biodiversity related fields, entering & graduating with

	Masters and PhD degrees - albeit not (only) attributed to the BHCDS.
Key decision-makers including leaders in the national skills development system	SETAs are funding green research but this is not translating into consistent and adequate funding for biodiversity skills; DHET giving recognition to sustainable development in teacher education but funding teachers to upskill for biodiversity remains a piecemeal responsibility. More favourable meta-conditions are needed. SANBI Mainstreaming Biodiversity, IPBES and other science-led activities do not engage with the BHCDS work.

This information is available in the following sections of the review report:

Section 6.2 (Strategic Goal 1 Outcomes and Impacts); Section 5.3.1 (*Fundisa for Change* Programme case study) and Section 5.3.2 (*Groen Sebenza* and WWF Internships case study). This information is available in the following sections of the review report:

Some transformation issues remain, as reflected in the *South African Journal of Science* paper declaring that black students are not interested in wildlife related studies, causing indignation among black scientists; more limited support in the *GreenMatter Fellowship* for students from historically black universities; and interviews with black graduates.

Finding 2: Up-skilling of existing employees and changing organisational cultures have received some but limited attention as workplaces struggle to provide appropriate training

SO2 (Up-skilling) Strategic Intent: Extend existing capacity	
Improve the skills of those already in the workplace, and underqualified or under-skilled in a manner that contributes to social equity, a sense of belonging and pride in the sector	Mentoring capacity of organisations has improved, with mentors' training and resources produced and distributed, as part of the HRD Network, Groen Sebenza and other sector initiatives.
	GreenMatter Fellowship funded upskilling programmes and built a strong sense of pride and belonging as reflected in beneficiary interviews, but on a small scale. Leadership upskilling started but not continued on a significant scale.
	HRD Network to improve capacity of organisations to upskill staff was not continued or reconceptualised after limited successes in first three years; workplaces struggle to identify or find and fund appropriate training for staff with the employer survey showing that disconnects between organisational strategy and HR functions still exist.

This information is available in Sections 6.3 to 6.5 (employer survey data); Section 5.3.2 (*Groen Sebenza* and WWF Internships case study) and Section 5.3.3 (Human Resources Development (HRD) Network case study).

The BHCDS implementation partners placed more emphasis on new entrants into the sector, as opposed to building the capacity of existing staff and current or future organisational leaders. This needs to be reconsidered given the need for existing staff to build up organisations to a point where they can increase the number of positions for new entrants into the sector.

Finding 3: Organisations' ability to retain and deploy skilled staff was not significantly addressed in the first 10 years of implementation, which emphasized new entrants; while engagement with the national skills planning system has had limited success

SO3 (Retention) Strategic Intent: Extend existing capacity through improved retention and effective deployment of suitably skilled people in the sector through ...	
organisational design & development ...	No initiatives to improve organisational development and design capacity, other than the HRD Network, which addressed this in a very limited manner before terminating.
... skills planning	National Environmental Skills Planning Forum, National Environmental Skills Summit and the Green Skills Programme engaged DHET and SETAs to improve the national system for biodiversity skills planning; outcomes have been limited and Summits have not continued on the same scale as in 2011, when they were evaluated as a strong mechanism to improve environmental skills planning. Labour market intelligence improvement by DHET has not yet show fruit and engagement with the biodiversity sector from the designated agency (DPRU at UCT) was limited to one study (Driver et al).
... human resource development processes	HRD Network to improve capacity of organisations to upskill staff was not continued or reconceptualised after limited successes in the first three years; workplaces struggle to identify or find and fund appropriate training for staff with the employer survey showing that disconnects between organisational strategy and HR functions still exist.

Find this information in Sections 6.3 to 6.5 (employer survey data); Section 5.3.4 (National Environmental Skills Planning Forum case study) and Section 5.3.3 (Human Resources Development (HRD) Network case study).

Finding 4: Entry into biodiversity study fields and pass rates are improving but may be at risk due to high student load and potentially decreasing capacity for curriculum innovation and quality teaching in Higher Education Institutions (HEIs), with historically black universities receiving less attention.

SO4 (Skills Provision) Strategic Intent: Improve the quality and relevance of training provided by universities and other training providers

Increase the relevance and quality of educational provisions by a wider range of higher education institutions (HEIs) and other providers ...	While HEI studies were undertaken and working groups established, the NRF and NSTF were engaged and providers expresses a strong interest, no curriculum innovation projects were supported. Historically black universities have participated less in BHCDS initiatives. The Work-based learning project was not continued despite a good start.
... in a manner that will improve pass rates	HEMIS data reflect a large increase in black students <i>graduating</i> in biodiversity related fields; however there is still a large number who enrol but do not graduate, and black women are less likely to advance into PhD studies, which has implications for leadership transformation. The growth in student numbers and simultaneous decrease in HE budgets put quality of education, skills produced, and future pass rates at risk. The Work-based learning project convened partners including the DHET to address the lack of funding for placements (which affect graduation rates of BTech students), but the impact of this initiative was not monitored and it was discontinued.
... and improve entry into the sector	HEMIS data reflect a large increase in black students <i>entering</i> biodiversity related fields of study; while this is part of a general trend, several initiatives address entry and access including the GreenMatter Fellowship; NRF and CATHSSETA bursaries; and careers projects. Fundisa for Change is a highly significant long term Foundation Building programme relevant to this objective.

This information is available in Sections 6.2, 6.3 and 6.5 (Outcomes and Impacts) and Section 5.3.1 (Fundisa for Change case study).

Finding 5: A teacher education system building project is in place with a coordinator, advisory body, support from national government and implementing partners (universities)

SO5 (Skills provision) Contribute to better science, mathematics, literacy and environmental learning in schools	<i>Fundisa for Change</i> has leveraged national and international funding off contributions from the Lewis Foundation (BHCDS) and DEA/DEFF (as part of the Environmental Sector Skills Plan). A coordinator is in place within SANBI, although the project is only part of her KPIs. Most universities have participated in the project which exposes teachers, student teachers, teacher educators and education department officials to training in the biodiversity and broader environmental content in the curriculum, to enable better qualified teachers able to better teach this content. The project has seen sustained activity and outcomes from 2011-2021.
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The success of this initiative is due to strong partnerships within the sector, sustained advocacy by the sector partners themselves, the availability of funding for environment and sustainability education linked to schools, and the partners making use of the alignment between the BHCDS and the Environmental Sector Skills Plan (ESSP). This information is available in Section 5.3.1 (*Fundisa for Change* case study).

Finding 6: While the sector has worked hard to promote Human Capital Development (HCD) initiatives, a key limitation in the strategy implementation has been sub-optimal coordination and the complete absence of shared monitoring, evaluation and reporting which also limits promotion potential.

SO6 (Meta-conditions) Strategic Intent: Increase impact through articulation and promotion	
Increase the impact of the collective effort of HCD initiatives relevant to the sector ...	Skills Summits served as significant opportunities to showcase, articulate, join-up and coordinate HCD initiatives but instead of scaling them up and out as recommended after the first evaluations (2011, 2015) they were cut back. Despite a significant funding investment in a coordinating and advocacy mechanism (GreenMatter) sector partners and external evaluators found that GreenMatter remained or became mostly isolated from sector partners and did not optimise its coordinating, convening and advocacy potential. The absence of shared monitoring, evaluation and reporting (a common and critical meta-condition) further weakened this outcome.
... through articulation (connecting initiatives)	Alignment with the ESSP was optimised in the <i>Fundisa for Change</i> programme, but there was only isolated alignment with the Global Change Grand Challenge and other relevant HCD initiatives, contributing to a more limited scale of impact than was desired by all involved.
... and promotion	The GreenMatter brand and website was established and GreenMatter arranged or engaged in a number of promotional activities including Fellowship events. WWF and other partners also promoted initiatives, in particular those giving access to the youth. Skills Summits served as significant opportunities to showcase, articulate, join-up and coordinate HCD initiatives but instead of scaling them up and out as recommended after the first evaluations (2011, 2015) they were cut back. HCD progress was reported at the Biodiversity Research and Evidence Indaba with limited impact. SANBI and partners' efforts at mainstreaming biodiversity (e.g. with the mining sector) are strong positive developments, that have remained somewhat disconnected from the BHCDS. The impact of initiatives was difficult to quantify for promotional purposes in the absence of progress and impact monitoring, evaluation and reporting.

This information is available in Section 5.3.4 (National Environmental Skills Planning Forum case study); Section 6.5 (Create enabling macro-conditions for skills planning, development and evaluation) and Section 7 (Gaps and Recommendations).

Finding 7: Initiatives are underway to address scarce skills needs but are hampered by a lack of monitoring, evaluation and reporting on biodiversity skills needs.

SO7 (Skills provision) Strategic Intent: Produce scarce and priority skills through targeted higher education guided by ongoing skills needs and gap analyses	
Increase the supply of scarce skills ...	Employers report that there are still skills gaps, including some that existed prior to 2010
... through targeted higher education in initiatives	Several initiatives address entry and access including the GreenMatter Fellowship; NRF and CATHSSETA bursaries; and careers projects.
... in priority areas identified through ongoing needs analyses	Following a skills gap analysis in 2011, no follow-ups were done to determine whether needs have been addressed and what new needs were identified. SETAs did provide funding for green skills needs analyses but none had a biodiversity focus.

This information can be found in Section 7 (Gaps and Recommendations).

In addition to the achievements and risks outlined above, the review identified implementation gaps which could improve the level and scale of impact, were they to be addressed. The recommendations below are aimed at addressing these gaps, while maintaining and upscaling the outcomes achieved.

Recommendations

1. Improve coordination capacity through multiple coordination hubs that between them can mobilise the strengths of civil society, government agencies and universities.
2. Improve articulation and synergy across implementation initiatives, through (1) and dedicated monitoring, evaluation, research, communications and convening platforms; strengthen the role of the NESPF or establish a more suitable platform.
3. Mobilise more sustained and more substantial funding and political support in line with the strategic importance of the sector for employment creation and sustainable development, and the key role of human capacity development in both.
4. Start and fund advocacy processes to engage key role-players and potential implementation partners both inside and outside the 'big five' of biodiversity agencies.

The above could be undertaken through the following actions:

- For coordination and advocacy, the sector has three well-established mechanisms: conferences, reporting (informed by consistent monitoring) and advisory boards or

steering committees. It is recommended that these established mechanisms be used more optimally.

- Fund coordination hubs with clear, realistic and agreed upon deliverables to overcome the principal-agency dilemma.
- This should include a coordinating hub with responsibility for the National Environmental Skills Summit which should be held annually to start with, following on the March 2021 Mini Skills Summit, in which syndicates (working groups) were established to take the BHCDS remit and review recommendations further.
- Institutionalise a shared monitoring, evaluation and reporting function as a vital coordination and advocacy function; drawing on the existing frameworks developed for the strategy.
- Conduct regular, guided evaluations and tracer studies for strategic and communication purposes (the sector has much to boast about); this function could potentially be situated in another coordination hub.
- Communicate the achievements, remaining capacity challenges and *possibilities* of the sector as part of a renewed BHCDS drive for the 2021-2030 period. Draw on key developments like the Dasguptha report; Decade of Restoration; ESD 2030; SDGs; CBD; and more to create a sense of urgency around the extent to which South Africa is losing its biodiversity, ecological infrastructure and ecosystem services, and a sense of optimism and opportunity around the extent to which biodiversity can contribute to jobs and livelihoods. Use this to leverage more substantial financial, human, and institutional resources and political support.
- Appoint a steering committee for the BHCDS implementation.
- Appoint an advisory board for the BHCDS implementation.

Other specific areas to address include:

1. Track impact of DHET MRTEQ and support where necessary (significant new opportunity)
2. Track the number of conservation WIL students funded to completion, in relation to sectoral needs
3. Track % of SET undergraduate pool going into university
4. Drive career guidance for students across faculties
5. Continue postgraduate bursary programme (and link with career guidance, as well as other national initiatives)
6. Continue to share benefits of mentoring and internship know-how
7. Start a high-level forum / think tank called *Biodiversity Leaders of Transformation - New and Old*
8. Continue to engage national skills intelligence systems to focus on biodiversity related skills needs, given the importance of the sector in the economy and its growth potential

9. GreenMatter to continue running but also monitoring the Fellowship?
10. Conduct an advocacy drive and engage DEFF and Provincial Agencies, SANParks to invite proposal on how they would like to be involved in the next 10 years of implementation. Do the same for organised labour, NEDLAC, DHET and SETAs; and for industry and the Departments of Water, Science and Innovation, and WRC.

Recommendations from the March 2021 Mini Environmental Skills Summit

Several specific but undeveloped proposals emerged from each of the syndicates' discussions. In general, there was overlap between these, so the syndicates should plan future activities collaboratively, so as not to duplicate effort. Key areas of overlap include:

1. Work on a skills intelligence system – the most detailed proposals for this came from Syndicate 3, but it was also mentioned by Syndicate 1 and Syndicate 6.
2. Tracer studies to track graduates and past interns – Syndicates 1 and 4.
3. Attracting young people to the sector and promoting field-based experiential learning – Syndicates 1 and 4.
4. Compilation of case studies for advocacy and communication purposes – specific proposals for a book were made by Syndicate 6, but they should work with Syndicate 5 since creating a coordinating hub or hubs will include the advocacy and communication functions.

Syndicate 2 (Organisational Strengthening) should perhaps be dropped. Although reviving the HRD network was a key recommendation of this review, there was little interest in this at the Mini Skills Summit. Several of the work areas for Syndicate are covered by other Syndicates, particularly Syndicate 4 (organisational cultures) and Syndicate 1 (mentorship and career development plans). An alternative way forward for Syndicate 2 could be to carry out an evaluation study of the Theory of Change for organisational strengthening in the BHCDS. It is possible that the reasons for the lack of success in creating more jobs and increasing budgets within organisations may not be related to leadership, but may lie within the context. Such an evaluation could produce a revised theory of change, and criteria for evaluating “effective organisations” and “organisational strengthening” in the next 10 years of the BHCDS. This would produce a stronger basis on which to focus the work of organisational strengthening.

There was general consensus that when the BHCDS is updated, its scope should be broadened beyond the current focus on universities and so-called higher level skills, to reflect the trend that has already started during the past 10 years of implementation of BHCDS programmes. Another key consideration was that the biodiversity sector should not just run in parallel to other sectors, but as an underpinning to and across all other sectors, with external and internal skills demands intersecting. In concluding the Summit it was argued that organisations need to *make the case for human capital in the biodiversity sector anew*, and more compellingly, showing that the benefits would not only be for a narrowly defined sector, but clearly link to the economy, broader social challenges and people's everyday lived reality.