

Demand and Supply for Conservation Skills

Green Skills Methodology Case Study

Prepared by Glenda Raven and Zoë Visser



Introduction

What is the status of this research?

From 2013-2015 [WWF-South Africa](#) (WWF-SA) conducted research into the status of conservation-related Work Integrated Learning (WIL) student internship placements. This research aimed to quantify the gap between supply of and demand for student internship placements. From this initial work, it was evident that further research was required to better align the placement of student interns with the demand for particular jobs and vacancies in institutions in the conservation sub-sector of the environmental sector. Through the [GreenMatter](#) Work Integrated Learning Programme, WWF-SA will conduct an in-depth analysis of demand- and supply of conservation skills. This proposed three year research project will run from 2016-2018, and funding for the first year has been secured from the Maas Maasen Foundation through [WWF Netherlands](#). The results of the research will inform the potential placement of student interns through the GreenMatter Work Integrated Learning Programme, and has the potential to inform skills planning for conservation in the Culture, Arts, Tourism, Hospitality, Sports Skills and Education Training Authority (CATHSSETA). This case study will focus on the proposed research and is written by lead researcher Dr Glenda Raven – Senior Manager of the [WWF-SA Environmental Leaders Programme](#) – and Green Skills Researcher Zoë Visser.

Purpose

What problem or question motivated the research?

This research was motivated by the need to better understand the link between graduates with ‘green skills’ that are developed through the Higher Education system, and the uptake of these graduates into conservation-related jobs. Previous research by WWF-SA focused on the placement of student interns was limited to understanding the consequent absorption capacity into institutions. Further research is now required to understand the jobs landscape. The demand for green skills needs to be quantified in the conservation sub-sector to support strategic planning nationally, and skills planning within individual organisations.

It is important to understand the policies and trends shaping future skills for conservation in order to plan effectively for human resource capacity that services the mandate of organisations individually and collectively. For example, the Protected Area Expansion Strategy (2008) does not envisage the establishment of new national parks but encourages expansion of stewardship agreements on private land. However, few, if any provincial agencies have significantly increased the number of Stewardship Extension Officers to implement this strategy. Skills planning needs to keep up with the job and skills requirements created by national and provincial policies related to the environmental sector.

Design

What methodology will be used?

A dedicated skills researcher with an understanding and experience of the environmental sector will undertake the proposed research over 3 years. The four phases of research and respective methods of data collection and analysis are described in detail below. Phase 1, Step A has already been partly undertaken by Dr Glenda Raven.

Phase1: Sub-sector contextual review.

In this phase of research, major employers in the conservation sub-sector, as well as their respective mandates, were identified and explored. A data collection spreadsheet was developed and emailed as a self-administered questionnaire to the full list of employers (hereafter 'the questionnaire'). This questionnaire probed the scope of staff complements that service the conservation mandate across agencies. Some responses were received, but further engagement with employers is required to gather a full sample of completed questionnaires.

It is estimated that Phase 1 will take a year for a dedicated researcher to complete. Data for Phases 2 through 4 will be gathered via the questionnaire, which will be complemented by organisational visits by the researcher, to assist human resource (HR) practitioners and conservation staff within organisations. It is anticipated that HR practitioners will struggle to fill in the employee information part of the questionnaire. Currently, public sector organisations are guided by the Department of Public Service and Administration (DPSA) policies, and therefore capture skills data according to the DPSA system, which is different from the Organising Framework for Occupations (OFOs) used by the Department of Higher Education and Training (DHET) to guide skills planning and development. The researcher will assist the public sector organisations and others to reflect skills data according to the OFOs.

Step A. Sector delineation. A comprehensive list of employers in the conservation sub-sector was drawn up. In some cases, employers needed to be contacted to confirm that they had a conservation function, particularly in the case of local municipalities. Included in the list were 286 local government agencies, including all metros and relevant district municipalities that have a conservation function. Parameters for the sector were based on experience of the researcher and on documents such as the National Biodiversity Strategies and Action Plan (NBSAP) and National Biodiversity Framework that both scope the conservation sector.

Step B. Individual organisational profiles. In this step, the researcher will identify mandates and the scope of the conservation activities being undertaken by various organisations. The latter could include particulars on: i) square hectares of the area under conservation; ii) biodiversity and ecosystem functioning importance/ significance (ranked high, medium or low); iii) level of development threats (ranked high, medium or low). This data will be used to guide the development of sector norms in Phase 3 that will in turn guide an assessment of skills needed to fulfil conservation mandates of various organisations.

Step C. Skills audit. A skills audit will be undertaken to establish how many people are already employed in the sub-sector, as well as the number of current and anticipated vacancies over the next five years. HR practitioners will be asked to fill in an employee profile as part of the questionnaire (distributed under Step A). The questionnaire lists all occupations in the OFO relevant to the conservation sub-sector. Against each relevant occupation the employer will fill in the number of employees with this particular occupational title, and the number of actual and anticipated vacancies. Respondents will similarly add a comment on the relative scarcity of skills in each occupational category, as: i) moderate; ii) serious; or iii) extreme.

Phase 2: Review of policy and trends shaping skills for conservation.

In Phase 2, a desktop analysis of policies influencing the conservation sub-sector will be undertaken. The 'Policies and Trends' section of the questionnaire requests respondents to list all national, provincial and local policies, strategies and action plans that shape the conservation mandate of their respective organisations. HR practitioners can indicate the policy related to a specific organisation from a given list and specify to which organisational functions it relates (i.e. research; planning; information management; or management). A desktop analysis will be done of these policies to assess the implications for skills needs in each organisation. Respondents are also requested to identify any key trends likely to shape skills needs in their organisations over the next 10 years.

Phase 3: Projected skills needs.

This phase will be undertaken through focus group discussion with key conservation and human resource management staff, and other relevant stakeholders across conservation organisations.

Step A. Value chain analysis. The questionnaire requests respondents to identify various key functions within their organisation from the following options: i) conservation research and monitoring; ii) information management; iii) conservation planning; iv) conservation management; v) conservation extension; and vi) law enforcement and compliance. This data will inform the development of a conservation value chain to be used in identifying skills needed to fulfil conservation mandates. This value chain will be confirmed with participants in focus group discussions.

Step B. Sector norms. Projecting skills demand through the use of sector norms is a common industry methodology. Respondents are asked to share any existing norms and / or information that might assist in forecasting skills needs. This step in the research process is to establish which operational norms currently exist within the organisation and / or to gather data necessary to propose these industry norms. For example:

- How many conservation hectares fall under the management of one reserve manager?
- How many conservation hectares are assigned to one conservation scientist?
- What scope of conservation does one stewardship extension officer cover?
- What is the line management ratio?

Step C. Skills projection. Drawing on the policy review, the value chain analysis, and sector norms proposed, an assessment will be made of the skills required within the conservation subsector.

Phase 4: Identifying conservation jobs required.

An analysis will be done by subtracting the number of positions filled in the sub sector (Skills Audit - Phase 1 Step C) from the projected skills requirements (Review of Policies and Trends - Phase 2). This will quantify the skills gap for different occupational titles in the conservation sub-sector.

The results of this analysis will be presented to employers within the sector through focus groups or a colloquium and their feedback will be solicited, prior to concluding the assessment.

Findings

What did the research find in relation to the research question?

This research will run between 2016 and 2018. There are therefore no findings to report at this stage. Results will be published as a report, which will be used to present results to the conservation sub-sector.

Reflections on the Research

- A key insight from the research to date has been the limited capacity within organisations to describe skills relative to the skills planning and development framework of the OFOs used by DHET and the SETAs. Addressing this capacity gap will require much interaction within organisations to elicit the data within the OFO framework.
- The volume of work is extensive and would require dedicated researchers, supported by expansive insight into the conservation sub sector.
- Interactions are a key aspect of the research methodology – conservation professionals have insights into the skills required to fulfil specific functions, as well as access to cumulative organisational data. The level of engagement required between researcher and conservation professionals will make this research particularly time and cost intensive.

References

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RESEARCH TEAM

Glenda Raven: Designer of the methodology

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