

## Biodiversity Information Management: Human Capital Development Issues & Actions

Workshop convened by the South African BIM Forum – 10 June 2009

### Workshop Report

The workshop formed part of the annual conference of the national Biodiversity Information Management Forum. As such it followed on (and was informed by) earlier discussions on capacity and capacity development in the sub-sector, at the 2007 and 2008 forums. Eureka Rosenberg ran the workshop as part of the stakeholder engagement she was contracted to undertake for SANBI and the Lewis Foundation, towards the development of a Human Capital Development Strategy for the Biodiversity Sector. She was assisted in the planning of the workshop and its facilitation by Selwyn Willoughby and Heather Terrapin of SANBI and Glenda Raven of the CAPE Capacity Building Programme. Rene du Toit lent a hand, and several guest presenters made short inputs. (See Outcomes of Activity 2, below.)

The broad programme for the workshop was as follows:

8h30	<b>Welcome Selwyn Willoughby</b>
8h45	<b>Introduction:</b> The DEAT Environmental Sector Skills Plan and Biodiversity Human Capital Development Strategy; Workshop objectives. <b>Eureka Rosenberg</b>
9h00	<b>Map out what is already known</b> about the problem: capacity issues, needs in the BIM sub-sector. <b>Eureka Rosenberg</b>
9h30	<b>Activity 1: Refine the problem identification and analysis.</b> <b>Group(s)</b>
11H00	TEA
11h30	<b>Activity 2: Identify &amp; evaluate existing initiatives and gaps.</b> Short presentations and discussion. <b>Invited presenters and group</b>
13h00	LUNCH
14h00	<b>Activity 3: Choose and plan actions</b> to address capacity issues, strengthen good initiatives and make use of opportunities. <b>Groups</b>
15h00-15h30	<b>Report-back</b> and Closure <b>Rapporteurs</b>

In addition, we tried to agree on the roles played by people working in this sub-sector, in order to identify required competencies – given that no needs analysis of skills required has yet been undertaken. However, the group could not easily agree on roles played by people in the sub-sector and a smaller group was tasked to work on this. For this reason we also did not attempt an occupational gap analysis, one of the options for Activity 3. We agreed however that both exercises would be valuable to undertake following the workshop. (See Outcomes of Activity 3, below.)

## Outcome of Activity 1 – Unpacking the Problem

### **The Problem: Shortage of appropriately skilled BIM professionals and the Need for Transformation.**

There are three obvious reasons for this problem:

**1. Skilled people don't stay.**

This problem must be redefined. A short turn over is undesirable, for the individual (not enough time to learn adequately) and the organisation ("we are upskilling people for the private sector"). But in the current context people do move between organisations and this is not necessarily a problem. The problem is the lack of continuity when they are not replaced timeously.

**2. Not enough skilled people arrive in the workplace.**

**3. People who arrive lack appropriate skills/combinations.**

**1. Skilled people don't stay, or are not readily replaced. Why?**

- Poor workplace skills planning and HR plans for succession, continuity.
- No structured organisational plans for continuous skills development
- Poor links between HR plans and Work Place Skills Plans.
- Organisations lack incentives to plan for future needs.
- HR/organisational decision-makers do not understand needs of the field.
- The value of BIM is not recognised in organisations.
- No budget (as opposed to no funds) for BIM.
- "Frustrating work environments".
- Under-qualified people in senior positions contribute to a frustrating work environment.
- "Poor pay"/uncompetitive salaries/benefits.
- There is a need for industry alignment across organisations (roles, pay).
- Poor retention of experienced staff.
- Poor retention of interns once trained.
- "Where to from here?" Career paths /progression limited.
- Lack of dual career path (management OR technical specialisation) options.
- "Moving on" Individuals using institutions as stepping stone. (This is 'natural')
- Occupational levels in science fields in government.
- Lack of passion for the job among incumbents.
- "Wasted skills" – existing skills are not utilised in the workplace.
- Outdated technology in conservation agencies – young people don't want to work with.

**2. Not enough skilled people arrive in the workplace. Why?**

- "Uncool"/Poor image/ marketing of BIM.
- Not culturally embedded - areas like taxonomy no longer supported by a culture of valuing nature and collections among the youth.
- Poor career guidance for scholars, undergraduates.
- Bursaries are insufficient.
- Shortage of posts for graduates.
- Government tends to outsource specialist skills, so there are few permanent posts.
- HR specifications for the job are inappropriate.
- Employers are looking for the wrong skills: "They are looking for old skills in young people".
- Generally in government departments, a loss of junior posts.
- Junior posts are no longer attractive to new entrants.
- Staff in other fields (in the organisation) are not utilised.

### **3. Those who do arrive lack appropriate skills/combinations. Why?**

- Weak links between academia and industry.  
(This received a number of votes as a key issue to address.)
- We don't know what skills/combinations the industry needs and at what level.
- Training is in old theory, skills that are no longer relevant.
- Training is focussed on need to know, not need to do. Theory is valuable, but it needs to be applied.
- Training is not as wide (geographically) as necessary.
- Employers have unrealistic expectations – no university can fully prepare a person for the workplace.
- Job descriptions are poorly defined; HR lacks an understanding of BIM.
- "What core does this fall under in the public sector?"
- No funds for workplace training.
- No time for workplace training.
- Mentorship capacity is limited/strained.
- No incentive to mentor novices/no recognition for the role of mentoring (compared to other performance areas such as publications).
- No cooperation from the IT SETA.
- Bursaries insufficient/no funds for training.
- "I already have a degree" - Poor motivation for self/further study.
- Training and support relatively strong in Metro areas but weak elsewhere.

#### **Patterns & Underlying Structures (Eureta's notes):**

- What skills and competencies are needed?
- What skills and competencies are scarce? Why?
- What is the demand
- It is a new field, a changing field and an uncoordinated field
- New areas of expertise are required in the organisations but poorly understood, catered for, and poorly supported (poor status in sector, organisations)
- 'One man bands' – no critical mass
- Need for leadership, champions?
- *Communication seems to be a key issue.*
- Territoriality/empire building/professional jealousy
- Hierarchies/power gradients/inequalities
- Ideological differences / contestations ... ?
- "Values are important" and can be a key factor in becoming 'employers of choice'.

#### **Outcome of Activity 2 – Unpacking the Problem**

##### **What Is Already Being Done?**

- Formation of the BIM Forum – Selwyn Willoughby, SANBI
- Targetted short course training e.g. for municipal staff – Selwyn Willoughby
- Table Mountain Fund bursaries and internships – Onno Huyser, TMF
- SANBI Internships – Rene du Toit, Deputy Director of Training, SANBI
- Mentorship Training through C.A.P.E. CBP – Glenda Raven, CAPE
- Mentorship support in Ezemvelo KZN Wildlife
- Higher Education – C.A.P.E. CBP Curriculum Innovations Initiative
- Schools' GIS Project – Alice Ashwell, EnviroEds ... and others.

All these initiatives explicitly address transformation in terms of representivity of designated groups. The Higher Education initiative will address issues of access to higher education, career guidance, and also transformation in the ideological underpinnings of curricula.

### Outcome of Activity 3 – Choosing and Planning Actions to Undertake

Participants voted for proposed initiatives on the flip charts and white board. Three initiatives received the most votes. They were

1. [Developing] Strategic institutional support for BIM
2. Doing a skills audit
3. Engaging Higher Education Institutions (HEIs)

#### Initiative 1: Report back from Group 3 on Strategic Institutional Support for BIM

Notes thanks to Brenda, EWT

Challenges:

- Translate the work being done in BIM into the country's development agenda.
- Institutions are not talking to each (e.g. GDACE and SANParks – projected area)

What do we mean? A CEO that understand the importance of BIM, provision of the necessary IT infrastructure, management of information for streamlining monitoring programmes.

Two approaches to CEO involvement

1. External – those driving it from outside
2. Internal – internally driven

Bottom-up and top-down  
Natural heritage (CSIR)

Suggestions:

- **Obtain representation on Mintec / Minmec** (provinces, local government and other agencies) in order to lobby, as a start, for greater coordination in and with the field. The focus of these committees are on streamlining development and climate change, and the case for the significance of the field can be made by demonstrating its contributions in these areas. Better coordination will eventually lead to a better understanding of resource needs and priorities. Consider a report-back by officials in next year's Forum (August).
- Push buttons and work on the 'fear and shame' factor; refer to the legal obligations of government departments to argue for greater organisational efficiency.
- Do audits within organisation at a high level of engagement – Are they reaching goals? This could feed into a session next year on Loss of Biodiversity.
- Hold people accountable but also place issues in perspective and support organisations.
- Legislation – compliance and highlighting the risks.
- Data sharing.

**Chosen Action:** Selwyn Willoughby to investigate representation on Minmec or Mintec, with Tanya Abrahamse's assistance.

**Timeframe:** Selwyn will advise once he has made initial enquiries.

#### Initiative 2: Report back from Group 1 on doing a Skills Audit

Notes thanks to Rene du Toit, SANBI

Initial discussion on competency profiling for Knowledge Information Management roles:

Discussed the suggested roles (see below) but could not reach agreement. The response (similar to the morning's discussion) could be contributed to the fact that participating individuals reflected on their own institutional structures – e.g. some have one individual fulfilling more than one role (job).

Roles identified by Selwyn and Glenda:

- General Information Manager

- Database Manager
- Systems Developer
- Technician
- Systems Analyst
- Information Analyst.

Jessica Grobler suggested that perhaps it would be better (and less threatening for some) if the task team lists all the activities/tasks that takes place within the KIM process and then to distribute to all BIMF participants to indicate which activity is applicable to them. From responses collated we can cluster into the different roles and identify the knowledge and skills requirements (which may already be reflected in the activities). (?)

May be best to do an in-house exercise first (with Selwyn, other KIM staff and those on the TT) and conduct a job profile analysis, in which we identify:

- the key work areas in KIM
- the purpose of each of those areas
- the roles (jobs) in each of those areas
- the tasks associated with each of the roles
- the knowledge, skills and attributes required for performance of each of the roles (we can also identify the appropriate qualifications attached to each of the roles)

We can then circulate the completed analysis to the broader group and request input.

Further to the comment on best practice made by the participant from Australia, is there a best practice model against which we can benchmark? Then we can compare the outcome of our analysis.

**Chosen Action:** Develop a set of competency profiles and then conduct a skills audit.

**Task team:** Jessica Grobler, Rene du Toit, Glenda Raven, Louisa Liebenberg, Reuben Roberts, Fatima Parker-Allie (all from SANBI)

**Time frame:** By end of July the competency profiles will be drafted with SANBI staff and input from supporters in other organisations. This work will feed into Initiative 3 (HEIs)

### Initiative 3: Report back from Group 2 on Engaging HEIs

Notes thanks to Michelle Hamer, SANBI

Suggested actions:

- **Review existing offerings** – some HEIs already offer useful programmes, e.g. OFS.
- **Review student numbers, motivations and throughput rates.**
- It may not be necessary to develop new programmes or curricula, but rather to:
  - Create synergy between departments, or
  - Enhance existing programmes, e.g. with guest inputs from consultants, SANBI staff other university staff.
  - **Information – career guidance** – high schools, HEIs and module advice.

**Chosen action:** Review existing offerings, but at the same time explore throughput rates.

**Task team:** Michelle Hamer, Selwyn Willoughby, Glenda Raven, Bayanda James (all SANBI)

**Timeframe:** Report back end August 2009

**Additional action:** The HCD Strategy research team could look into student numbers and motivations, as well as career guidance, by creating a specific category for this field in their surveys and quality research. This team could also explore with the HSRC the possibility of reviewing Sunday papers advertisements, but the inconsistent description of job titles might hamper such a study.

**Other suggested actions included:**

- Find ways to become "an employer of choice".
- Strengthen performance management.
- Conduct an occupational gap analysis.
- Lobby top management.
- Help HR understand BIM better.
- Institutional career pathing improvements.
- Develop case studies of how various organisations do BIM ... which can be built into 2010 Forum. (Selwyn, Eureka, Heather)
- Develop new short courses (Selwyn, Judith)
- Schools GIS/technology programme (Ashton)
- Mentoring strengthening (Louisa, Dominic, Jessica)
- Induction into the workplace (Louisa, Jessica)