

What do you do when the steel mill closes?

Liza J. Miller

Formerly of Rivers and Wetlands Unit, Scientific Services Division, NSW Department of Environment and Climate Change, PO Box A290 Sydney South NSW 1232

Many workers at the Royal Zoological Society of New South Wales' recent forum indicated that employment opportunities in science were declining. When traditional areas for ongoing employment, such as government entities, decline then the challenge for workers is to reconsider and prioritise their career aspirations. Such challenges are particularly prevalent for early and mid-career scientists. Late career scientists, on the other hand, are often in a situation where their record of accomplishments and expertise offers them some resilience as workplaces refocus their priorities. Early and mid-career scientists may not have this option as they are building and developing their expertise and accomplishments. In addition, they may need to consider their employment opportunities as their personal and professional aspirations and needs change over time. How these scientists adapt to industry changes and balance their personal and professional priorities and aspirations depends on their potential to identify career opportunities in changing workplaces.

So what do you do 'when the steel mill closes?' For many people in and outside science this scenario is not unusual. Indeed many non-scientists are expected to undergo several major job changes in their working life and it's likely that scientists will begin, or have already begun, to reflect this trend. Until recently many scientists may have enjoyed recurrent funding and the opportunity to work in an area that they felt passionate about. But when such opportunities decline or disappear, the challenge for scientists is to seek other comparable areas of funding, or move into an area that is more secure. This situation can occur as government agendas and priorities change, or when major political or environmental events occur.

In response to changing government funding priorities, early and mid-career scientists, in particular, need to consider adopting a strategic view of their career development. That is, in light of (changing) research priorities in Australia, scientists need to think about

what outcomes they want to achieve for their careers and their respective areas of expertise. This is because simply responding to priority areas of research as they develop is not necessarily a sustainable approach and could lead to a patchy and erratic work history; therefore, making further employment opportunities increasingly problematic. One option to consider is that scientists could define the potential outcomes and benefits of their work to the broader (non-expert) community, and consider where they can positively contribute to priority areas of funding.

However, for science one of the costs of this strategic approach is a potential loss of expertise. Knowledge gaps are likely to emerge; particularly in areas such as faunal and floral systematics which can require several years of experience to accrue expertise. Such gaps can leave the Australian environment vulnerable to exotic and native pest outbreaks and invasions and the relevant authorities may be unable to develop effective control programs in a timely manner. For individual scientists the potential benefits of a strategic approach to their career development are; that with increasing exposure to a broader range of disciplines they will have an opportunity to synthesize otherwise disparate areas of research. Therefore knowledge gaps may be addressed and potential environmental issues may be averted or minimised.

By nature this is an opportunistic approach and scientists are at risk of becoming highly skilled generalists at the expense of their expertise. But as long as career opportunities decline or change, and government priorities shift with public perceptions, then this strategy career of development is likely to become entrenched in Australian science. The challenge for scientists is to endeavour to highlight the benefits of their work to non-expert communities as one way of justifying their positions, and provide opportunities for seeking and establishing linkages and syntheses across seemingly disparate areas of endeavour.