UNDERSTANDING THE RISK: REAL WORLD APPLICATION OF THE GENERAL BIOSECURITY OBLIGATION, MORE THAN KILLING INVASIVES

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ABSTRACT

The Queensland Biosecurity Act 2014 (the Act) provides a 'cohesive legislative framework for governments, industries and communities to respond to pest species in Queensland'. A significant change identified from previous legislation has been the transition from 'prescriptive' measures for control and management of invasive plants, to a risk-based approach. Management decisions made under the Act will depend on the likelihood and consequence of the pest impact not on the mere presence of the invasive species. The broadening of legislative responsibilities so that everyone now has a general biosecurity obligation (GBO) is a key mechanism within the Act that supports the risk-based approach of invasive plants, along with other legislative requirements for certain landholders.

The Act does not prescribe all the actions that are needed to meet the GBO in any given situation. It leaves much of what is required to those dealing with the biosecurity matter and associated risks and describes those actions required as what is reasonable and practical to minimise the risk associated with the biosecurity matter or activity in question. The determination of the risk associated with biosecurity matter and what are reasonable and practical measures to manage the risk will be influenced by many factors. It is therefore reasonable to assume that how biosecurity risks are managed may differ from land manager to land manager but be guided by Local Government Biosecurity Plans.

In this paper we discuss the complexities and application of the GBO in the real world context of managing risk associated with invasive plants with reference to giant rat's tail grass and lantana, two significant invasive plants in Queensland.

DEFINING THE GENERAL BIOSECURITY OBLIGATION (GBO)

A key part of working with the GBO is to define it so it is understood within the context in which it is being used. To do this it is necessary to move the GBO from a theoretical concept to an applied practical response to assist with the management of invasive plant species or other biosecurity issues in a given situation. Common issues/questions that arise when defining the GBO are differing landholder and officer experiences, perspectives and expectations; how we discuss the GBO within a relevant context; what are the minimum requirements/actions that will meet the GBO; what is enforceable and who is ultimately responsible. Working through these issues to come to a common understanding of what the GBO means, how it is applied and what are the minimum actions to comply with the GBO is necessary in order to

understand what reasonable and practical actions are to minimise the risks associated with the management of invasive plants.

Education is a key component in effectively communicating the practical application of the GBO, which once understood greatly assists with compliance. Experience from local government officers indicates that when the GBO is mentioned, land managers tend to switch off as the concept is foreign and technical. Reframing the GBO concept and portraying it in a way that demonstrates what it means practically for the land manager on their property is necessary to overcome this and assist with land manager understanding and buy in to GBO principles (e.g. reducing risk of seed and/or population spread).

The complexities of applying the GBO can be difficult for local government officers whose job requires them to understand, apply and communicate GBO principles to land managers and the wider public. Understanding that the application of the GBO can be quite individualised and specific to any given piece of land is often a difficult concept to communicate, with many land managers seeming to prefer a consistent set of management actions for any given invasive plant no matter where it occurs. Further, concepts like “reasonable and practical” that are often interpreted as vague are highly dependent on interpretation within the context of any given land management situation. This complexity in explaining/applying the GBO within a local government context often result in neighbour disputes, especially when the neighbouring land is government owned. A common scenario is that the government land managers are assumed to be doing nothing to meet their GBO obligations because there are no visible management actions taking place within sight of their fence line, when the actual case is that the actions required to meet GBO obligations have been developed within the context of the neighbour’s broader land management objectives and invasive plant species present.

Many land managers seem to still work in the pest management paradigm associated with the previous Queensland legislation. They have the view that the invasive plants that need to be controlled are on a defined list and if these listed plants are not being actively controlled then invasive plant management obligations are not being met. This is in stark contrast to requirements in the Act, which for widespread invasive plants generally does not require invasive plant death at all costs. To meet current biosecurity obligations, the Act takes a risk management approach whereby land managers are to manage risk associated with the biosecurity matter in question. This concept can be particularly difficult to communicate to land managers and for land managers to accept, particularly when GBO obligations require the management of risks associated with unregulated invasive plants such as grader or thatch grass. Whether unregulated invasive plants should be subject to similar management obligations to those of regulated invasive plants can be a grey area in terms of Local Government biosecurity activities. Local Government Biosecurity Plan risk assessment processes can determine biosecurity risks associated with unregulated invasive plants and prioritise activities according to identified risks.

One biosecurity principle, that of responsibility for invasive plant control, has not changed with the introduction of the GBO under the Act. Both the previous Act and the current Act are consistent in assigning the responsibility for invasive plant management to the land manager for any particular parcel of land. The Act also states

that it is reasonable to expect land managers to understand the risks associated with biosecurity matter on their property. While assistance can be sought (mostly via information) to manage invasive plants, the responsibility for undertaking activities to meet the GBO are the land managers/occupiers and not government unless the land in question is government owned land. Perhaps an increase in education about the GBO, risks and management options from all levels of government rather than assuming land managers already know would go a long way to improving biosecurity outcomes with respect to invasive plants.

Within the community, local and state government invasive plant management is seen as black and white, with invasive plants reported and immediate action by way of control expected. The concept of managing risk and what is reasonable and practical as opposed to seeing dead plants is not fully understood, nor is the wider local or state government perspective.

For example, with giant rat's tail grass on roadsides, is sending contractors once a year to control it enough to meet the general biosecurity obligation? Due to allocated funding and resources, you can justify that it is a reasonable and practical step to manage it. However, the once a year approach only takes out the existing generation of giant rat's tail grass and does nothing to control any new plants appearing in the remainder of the year. This can still be reactive, and realistically, local governments can't manage all reactive and proactive requests. The once a year approach for invasive plants can at least give the appearance of reasonable and practical action but in reality, it may not be producing the kind of result that manages risk associated with giant rat's tail grass.

Managing risk and what is reasonable and practical action are key concepts which underpin the real life/time application of the GBO and are discussed below within this context.

UNDERSTANDING RISK IN A GBO CONTEXT

There are two aspects of managing risk within an invasive plant context. They are knowing the risk associated with the invasive plant and knowing what's at risk if the invasive plant is left unmanaged. It is a vastly different approach to the 'see invasive plant, kill invasive plant' approach outlined in the paradigm of the previous act. Understanding risk by knowing the risk and also knowing what's at risk is critical to improving the application of risk management approach for invasive plants.

Perception/knowledge of risk is inherently subjective and can often be based on personal experience, untested theories, hearsay amongst colleagues or the broader community. What is often lacking is actual knowledge about the invasive plant, assets that are at risk and what the priority is when determining relevant activities to minimise the risk. We suggest that more common than not, this is what determines how risk associated with invasive plants are managed or in fact whether they are managed at all.

Within a local government area, this requires a common understanding of the risks and the development of a priority list of assets to protect and how the risk associated with

a particular invasive plant would impact on each asset. There would also need to be a shared knowledge/understanding of what measures could be used to effectively manage the risks not only associated with the invasive plant, but also the asset that is being protected. A clear understanding of the consequences of not managing risks associated with a particular invasive plant whether that be lowered production, loss of amenity, loss of ecosystem function, or more available resources to protect higher value assets is also needed. One of the aims of Local Government Biosecurity Plans is to identify and prioritise activities based on risks associated with invasive plants, however this may need to be better communicated to the community to assist with improving biosecurity outcomes.

Scale is also important to consider when determining how to manage risk. Is the risk associated with invasive plants to be determined and managed on a paddock scale, property scale, district scale, local government area scale, state or national scale? This will come down to the perspective of the decision maker and in particular, the perspective of the three levels of government in Australia. The perspective of the land manager needs to be taken into account; however, their perspective may often have to yield to that set by the authority that determines the rules under which biosecurity, the GBO and associated risk operate.

Determining a prioritised list of assets to be protected while balancing government and community expectations is a necessary but sometimes fraught exercise in understanding the consequence of losing an asset relative to the cost/benefit of protecting it. Often calculating the cost of losing or benefit of maintaining an asset such as an intact wetland ecosystem can't be documented in pure dollars terms. Therefore qualitative/subjective assessments of amenity, environmental, heritage and cultural values to the community are often used to determine the priority in which these assets will be protected.

There can also be significant conflict between the risk management expectations of policy makers and the reality of what can actually be achieved on the ground or the perception that there is one rule for this land manager and another rule for another. Perhaps the most clear example of this conflict is where land managers are working with local government to manage invasive plant risk, while there are land areas owned by other land managers that contain invasive plants with the appearance of little or no management activity. In reality this conflict may be a result of not understanding/ accepting the risk management approach under the Act and assuming the presence of live invasive plants translates to a lack of action.

Differing perspectives of risk can often produce conflict within communities. For example, a parcel of native bushland owned by an environmental trust can be viewed by a neighbouring beef producer as high risk because it is viewed as a harbour of invasive plants and animals that will likely lower production and increase management costs. In contrast, the environmental trust can view the exotic grass pasture and leucaena on the beef property as high risk invasive plants because it can destroy habitat that is valued for its amenity and intact ecosystem. Local government often end up in the middle of these conflicts being the on ground biosecurity presence in the area. In reality, the solution lies in understanding risk from both points of view and the implementation of risk mitigation actions on both sides of the boundary fence relevant to what is considered reasonable and practical.

To understand the risk associated with invasive plants requires a level of knowledge about the invasive plant and how to implement actions to mitigate identified risks. This will require the ability to understand differing perspectives and then to work together to develop a set of risk mitigation actions that work towards meeting GBO requirements.

REASONABLE AND PRACTICAL ACTIONS

What is “reasonable and practical” is a term that is particularly difficult to define and apply from both a landholder and biosecurity officer viewpoint. There are many perspectives that can influence how ‘reasonable and practical’ is defined and what actions meeting this requirement would look like when implemented. Who determines what action is reasonable and practical and how it can be enforced seems to be open to discussion within local and state government organisations.

What is clear is that the determination of what a reasonable and practical action is, should be done with an understanding of what the actual risks are with any invasive plant. If the risk is seed spread, which is one of the key risks with giant rat’s tail grass, then clearly reasonable and practical actions should aim to minimise that risk. Reasonable and practical actions to minimise seed spread may include putting vehicle clean down procedures in place, protocols to ensure seed is emptied from the gut of cattle before loading on to trucks, effective buffer zones around boundary fences and maintaining as far as possible access tracks free of giant rat’s tail grass. Reducing the extent of the giant rat’s tail grass infestation size and its density by a combination of herbicide and fertiliser application (where appropriate), competitive pastures and sustainable pasture management practices will also assist in reducing the risk of seed spread. Only some of these actions will be relevant within an environmental context.

Determining what reasonable and practical actions are, is far more complex and nuanced than simply focusing on the more technical aspects of managing risks associated with invasive plants. In the real world, decisions about what is reasonable and practical often need to be made on a case-by-case basis. This is due to the varied circumstances of land managers which may include resource availability, capacity to implement the action and land use. It is situation based which often results in inconsistencies in approach, which can be difficult to explain to neighbours, managers and the wider public. However, this does provide opportunity to explain to land managers that while keeping a focus on managing invasive plant risks, there are a range of ways to achieve a reasonable and practical outcome that can be used/modified depending on circumstance.

With this in mind, the term ‘reasonable and practical’ is often an open phrased term where answers to questions can be a little vague but are used to allude to what may be reasonable and practical within a land manager's circumstance. When discussing this with land managers, officers are often faced with making several assumptions about the land holder, their property, their capacity, skill level and available resources. For example, farmers often have higher level skills to manage invasive plants as they have land management experience, usually have some equipment and knowledge about invasive plant management. The level of skill, available equipment

and resources will likely differ between land managers and is taken into account when determining what is reasonable and practical.

Another aspect which is critical in this decision-making process is the need to have a reasonable knowledge of the invasive plant biology, effective management options and spread pathways. This indicates that education of land managers is a crucial component of the day-to-day work of local government biosecurity officers to enable the development of reasonable and practical actions for a given situation that includes all the nuance discussed above. This can be resource intensive and take a considerable amount of time and will require prioritisation of the most important invasive plants to manage and critical assets that are to be protected.

Local government officers are commonly responsible to make the invasive plant management decisions so that the desired outcome can be achieved. The complexity in determining what is reasonable and practical that is outlined above often makes it difficult for local government officers to make and communicate the right invasive plant management action. Perhaps it will involve identifying the management action that will have the most impact in reducing risk or targeting the priority species in a field of many invasive plants. Judgement calls will need to be made and supported by sound reasoning. This will require the authority to undertake a significant amount of planning, setting of priority species and assets and development of what could be considered minimum management requirements for groups of similar invasive plants so that a relatively consistent approach can be implemented across the local government area. This approach and the management actions that result could then be considered to be reasonable and practical within the requirements of the Act.

PRACTICAL EXAMPLES OF THE APPLICATION OF THE GBO

The application of risk-based methodologies faces complications when different land tenure and perspectives arise. This is evident in the management of lantana.
For an individual property, lantana may be the highest priority species due to its impacts to production land and native vegetation. Therefore, undertaking the property risk assessment of level of invasiveness, distribution and impact to the land, it would be ranked highly for management. Taking this example to a local government scale, if lantana was spread across an entire area, it can be no longer reasonable and practical to control every single infestation. Due to the scale and spread of infestations as well as potential vectors for ongoing re-infestations, the risk assessment would display lantana to be asset-based management. This means that at identified assets (e.g. environment reserves, infrastructure, public safety), management would occur and overall be a lower priority for landscape scale management. For a state-wide entity, the ability to manage all lantana infestations also becomes no longer practical or reasonable. In certain situations where management is unlikely to occur, lantana may be better than bare soil and therefore is serving a benefit. However, like the local government scale, priority would be provided to identified assets. Perception of risk and what actions are being undertaken then become part of the conversation. There are already differences in risk assessments and therefore expectations on what is deemed required management.

It is a common occurrence for Council to receive customer requests advising lantana has encroached over the road and is now growing adjacent to their property. The landowner spends a great deal of time and money treating their property and would appreciate Council eradicating this invasive plant from the road verge. This would trigger an onsite evaluation to determine any nearby high value assets such as a waterway or productive agriculture land. If no assets were identified, the request to 'eradicate' lantana would not progress. This result would not satisfy community expectations as they are putting the effort in to manage the invasive plant on their property. Therefore, is Council meeting their GBO by not controlling lantana along this road and is it worth doing the control work to ensure future council/landholder collaborative environmental projects in the area are not jeopardised through ill feelings as a result? This conversation is common and highlights the 'not in my backyard' mentality. How this works in practice will likely require some trial and error and periodic review in order to continually improve the process.

CONCLUSION

It can be concluded that the implementation of the GBO is complex and the application in the real world of managing risk associated with invasive plants is situational based. Assumptions regarding capacity, knowledge, skills and resources both for local government officers and land managers influence the reality of applying reasonable and practical control measures. The discussion above and the examples provided give an insight into the application on the ground of the GBO, and the nuances experienced. Whilst we cannot provide answers to these current conundrums, it is worthwhile bringing these experiences to light and start the conversation on the practical application of the GBO in the real world.

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