**Guidance for External Experts to Score Species before Workshops in Anguilla and TCI**

We plan to start the workshop in Anguilla and TCI with draft scores for all species. These will then be presented, reviewed and modified during the workshop.

External experts are asked to work in their taxonomic groups to provide the initial scores for species before the workshop. This document provides additional detailed guidance for this.

The guidance is separated into three parts:

1. Workshop 1 – prioritising the spread of species from one island within the territory to another island within the territory.
2. Workshop 2 – prioritising the eradication of species from the whole territory.
3. Scoring confidence – both workshops involve scoring confidence in the same way. Simple guidance for this is provided.

The guidance should be read in conjunction with the scoring templates (excel spreadsheets sent seperately).

**Workshop 1**

*Aim: To derive a ranked list of species that are likely to move from one island to another, establish and cause impacts over the next decade.*

**The starting list**

A list of non-native species and the ‘recipient’ islands at threat will be provided. More than one ‘recipient’ island may be listed for each species, in which case each is assessed separately.

At this stage the role of the external experts is to assess the likelihood of each species being able to establish and cause impacts on each recipient island. External experts should not consider the likelihood of the species arriving on the island as this is being assessed by experts from each territory.

**Step 1 – scoring likelihood of establishment (on recipient island)**

If the species were to arrive on the island, what is the likelihood of it being able to establish (i.e. form a self-sustaining population)? Take into account the ecological properties of both the species and community that it is invading. Scores should reflect life-history characteristics including reproductive rate and ecological features such as tolerance of a broad range of environmental conditions or availability of food supply in the introduced range.

**Step 2 – scoring magnitude of impact (on recipient island)**

If the species were to establish, how much impact could it have? The primary focus is on biodiversity impact, paying particular attention to rare or important native species (e.g. endemics and globally threatened species) that might be affected. Biodiversity impact is defined using a 5 point scale (table below – note these have been modified from categories used in the EICAT scheme). If there are also likely to be human health or economic impact please note this in the appropriate column of the scoring spreadsheet.

|  |  |  |
| --- | --- | --- |
| **Score** | **Biodiversity impact** | **Example for OTs assessment** |
| 1 – minimal | None or negligible  | NA |
| 2 – minor | Reductions in the performance of individuals in the native biota, but no declines in native population sizes | A native species remains established in similar numbers and extent, but there are impacts on the fitness of individuals (e.g. through predation, competition, etc.) |
| 3 – moderate | Declines in the population size of at least one native taxon (not of particular conservation importance). Not extinction. | A native species not of particular conservation concern remains established on the island, but is reduced in number and / or extent. |
| 4 – major | Population extinction of at least one native taxon or population declines in a native taxon of particular conservation importance  | A native species not of particular conservation concern is driven to extinction on one island, but survives as a native species in other areas within the territory or elsewhere. Or a decline in a population of particular conservation (e.g. of an endemic or globally threatened species). |
| 5 – massive | Irreversible population or global extinction of at least one native taxon | A native species endemic to the island and no-where else is driven to extinction |

**Workshop 2**

Aim: *To rank species based on the feasibility of their complete eradication from the territory. Note eradication is from the whole territory (not just from individual islands).*

**Starting list**

A list of species established on the territory will be provided. For each species the current situation will be defined (i.e. the species current distribution), providing information on:

* On which islands within the territory the species is currently present.
* The total area covered by the species across the whole territory (i.e. all islands).
* The number of discrete populations of the species that are present in the whole territory (i.e. all islands).

**Step 1 – define the eradication strategy**

Based on this information, a brief strategy should be described by the assessor the aim of which is to completely eradicate the species from the territory. This will be a single strategy, but could include multiple methods (e.g. trapping, chemical use and mechanical removal). The strategy that is most likely to be successful should be described, avoiding being too conservative (i.e. no eradication possible despite techniques being available) or unrealistic (i.e. cost / damage caused vastly outweighs potential benefits). If no realistic strategy can be envisaged then it can still be useful to quickly assess extreme strategies. If necessary, more than one eradication strategy can be assessed.

**Step 2 – assess the eradication strategy**

The eradication strategy should be assessed using the criteria defined under the headings below (steps 2a to 5). The response score is a 5 point scale from 1-5 (table below). In all cases 1 is the least favourable and 5 the most. For example, a very effective eradication strategy scores 5, a very ineffective strategy scores 1; whereas a very inexpensive strategy (i.e. the cost favours taking action) scores 5, a very expensive one scores 1.

|  |  |
| --- | --- |
| **Criteria** | **Response Score** |
| **1** | **2** | **3** | **4** | **5** |
| *Effectiveness* | Very ineffective | Ineffective | Moderate effectiveness | Effective | Very effective |
| *Practicality* | Very impractical | Impractical | Moderate practicality | Practical | Very practical |
| *Cost* | >£10M | £1-10M | £200k-1M | £50-200k | <£50k |
| *Negative impact* | Massive  | Major  | Moderate | Minor | Minimal |
| *Acceptability* | Very unacceptable | Unacceptable | Moderate acceptability | Acceptable | Very acceptable |
| *Window of opportunity* | < 2 months | 2 months - 1 year | 1 – 3 years | 4-10 years | >10 years |
| *Likelihood of reinvasion* | Very likely  | Likely | Moderate likelihood | Unlikely | Very unlikely |
| *Conclusion (overall feasibility of eradication)* | Very low | Low | Medium | High | Very high |

**Step 2a - effectiveness**

This part of the assessment scores how effective the defined eradication strategy would be regardless of other issues, such as the practicality of deploying methods, costs, acceptability of methods, etc. which are taken into account elsewhere. For example, the eradication strategy for a non-native fish in a river could be to flood it with the piscicide rotenone – this would likely score ‘very effective’ despite low scores associated with practicality, impact and acceptability.

Points to consider:

* How effective has this approach proven to be in the past or in an analogous situation?
* How effective is the approach despite the biology / behaviour of the target organism?

**Step 2b - practicality**

How practical is it to deploy the described strategy? In particular, consider barriers that might prevent the use of the strategy such as issues gaining access to relevant areas, obtaining appropriate equipment, skilled staff, chemicals, etc. If there are any legal barriers to undertaking the work these should be assessed here.

Points to consider:

* How available are the methods in the risk management area?
* How accessible are the areas required to deploy the eradication strategy?
* How easy would it be to obtain relevant licences or other approvals / permissions (e.g. access permission) to undertake the approach?
* How easy would it be to overcome legal barriers?
* How safe are the methods used in this approach (are there health and safety barriers)?

**Step 2c - cost**

Cost relates to the total direct cost of eradicating the species from the risk management area using the defined eradication strategy. Total cost includes the cost of staff, resources, materials, etc. over the entire time period involved in the eradication and any required post eradication surveillance and follow-up. Note indirect costs (e.g. loss of business) are considered an impact and not recorded here.

In your comment, indicate the period over which costs would be occurred (i.e. number of years) and, if possible, indicate whether the cost would be evenly spread, frontloaded or back loaded.

**Step 2d - impact**

Impact relates to the impact of the eradication strategy itself. It is important to note that any indirect economic impacts (i.e. economic consequences of the eradication strategy rather than the cost of the strategy itself) are recorded here and not under ‘cost’.

Points to consider:

* How significant is the environmental harm caused by this approach?
* How significant is the economic harm caused by this approach?
* Examples of economic harm might include: reduction in the ability to trade or do business as a result of the management method; loss of earnings; reduction in tourism; reduction in house prices; etc.
* How significant is the social harm, including to human health, caused by this approach?
* Examples of social harm might be a reduction in a person’s use or enjoyment (e.g. preventing them walking in a woodland or fishing in a river), disruptions of communities, etc.

**Step 2e - acceptability**

Acceptability relates to significant issues that could arise as a result of disapproval or resistance from individuals, groups or sectors. This does not include regulatory or legislative barriers which are considered under practicality.

* How acceptable is the approach likely to be based on environmental / animal welfare grounds?
* Note this question relates to likely criticism / resistance that the approach would meet based on environmental / animal welfare grounds.
* How acceptable is the approach likely to be to the general public?
* How acceptable is the approach likely to be to other stakeholders?

**Step 3 – asses the window of opportunity**

The window of opportunity relates to how quickly the species will spread beyond the point that eradication, using the defined strategy, would be effective. Assessors should consider how long it would take before the responses given to other steps (2a-2e) would no longer be valid.

**Step 4 – assess the likelihood of re-invasion**

Assuming the eradication is successful, i.e. there are no wild populations of the species left, how likely is it that re-invasion will occur? Note that unless the eradication strategy has deliberately targeted populations in containment or otherwise not in the wild (i.e. in gardens, zoos, etc.) introduction from these should be considered part of re-invasion.

**Step 5 – determine the overall feasibility of eradication**

This is the conclusion of the assessment. A score should be provided for the overall feasibility of eradication taking into account all other factors (i.e. steps 2a – 4). Assessors should provide a score they judge to be appropriate, taking other scores into account (but note the overall score is not necessarily the mean of other scores).

**Scoring confidence**

For every score please record your confidence in that score. This should be based on your expert opinion, but the table below is provided as a guide to the different confidence levels.

|  |  |
| --- | --- |
| Confidence Score | Examples |
| High | There is direct relevant evidence to support the assessment. |
|   | The situation can easily be predicted. |
|   | There are reliable/good quality data sources relevant to the assessment. |
|   | The interpretation of data/information is straightforward. |
|   | Data/information are not controversial, contradictory. |
| Medium | There is some evidence to support the assessment. |
|   | Some information is indirect, e.g. data from phylogenetically or functionally similar species have been used as supporting evidence. |
|   | The interpretation of the data is to some extent ambiguous or contradictory. |
| Low | There is no direct evidence to support the assessment, e.g. only data from other species have been used as supporting evidence. |
|   | Evidence is poor and difficult to interpret, e.g. because it is strongly ambiguous. |