A principles-based cost-recovery framework for biosecurity and wider government investment decisions

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Godzilla
The Cost-Recovery Decision Tree

- Deficiencies of current arrangements:
  - ‘Ad hoc’ arrangements;
  - Deficiencies in ‘cost sharing agreements’;
  - Over-reliance on ‘risk analysis’.
The Cost-Recovery Decision Tree

- An objective ‘principles based’ decision tool:
  - Defensible
  - Repeatable
  - Transparent
The framework was based on:
1. ACTION: Identify the nature of the problem
Then conduct a market failure test as below:

1(a) Externalities: would the biosafety threat be likely to
significantly affect those not directly involved in the risk
spreading transaction? For example, the spread of a pest or disease.
Yes

1(b) Industry goods: would the private sector/industry (if
left unassisted) fail to provide an adequate level of
investment to remove (or reduce to an acceptable level)
the biosafety threat? For example, an industry may fail to pay for a
monitoring program (that provides industry benefits), due to lack of
an appropriate collection/delivery mechanism.
Yes

1(c) Asymmetric information: Does one party to a transaction have more or better
information than the other party in relation to the biosafety threat, thus creating an
environment where some transactions are inefficient?
No

Market failure present – Government action may be justified

2. ACTION: Devise a Proposed Biosafety Program or Activity
The proposed intervention should be designed to overcome the specific market failure identified above.
The component parts of each activity/program should be considered separately through the remaining points.

3. Would it be necessary to regulate for the provision of this activity/program?
(e.g. to pursue impactors, establish industry levies, enforce compliance certification, etc.)
Yes

4. Do not provide unless industry
requests government involvement and agrees to pay for the provision! (this may
also require a regulatory basis)
No

5. Would the activity/program involve “Registration / Approvals” or
“Compliance / Enforcement”
Yes

6. Would it be appropriate to recover costs from the individual risk
creator is individuals or firms? (through a fee or fine, as opposed to
recovering costs from an entire industry through a levy?)
No

7. Would other individuals/firms be able to free ride on the
approval of the first applicant?
Yes

8(a) Would the major beneficiaries be a
narrow identifiable group? (e.g.
individuals or industries)
Yes

8(b) Would any of the identifiable minor beneficiaries capture enough
benefits to warrant paying for the provision? (sufficiency of need)
No

9(a) Would changing an
individual firm for the activity/
program be efficient and cost
effective? i.e. are the affected
parties identifiable, is there (or
could there be) a fee collection
mechanism in place and would the
amount of money collected be likely to significantly
outweigh the administrative costs of doing so?
No

9(b) Would “group-based”
cost recovery be both efficient
and cost effective? i.e. are the affected
parties identifiable, is there (or
could there be) a levy collection
mechanism in place and would the
amount of money collected be likely to significantly
outweigh the administrative costs of doing so?
No

10. ACTION: Conduct a Benefit Cost Analysis
Only proceed with options in which benefits are greater than costs.

11. If the impacts of the biosafety threat lie solely within one sector or industry, the responsible funding party
government/leveling industry may decide for the proposed biosafety activity/program not to be provided. Otherwise:

12.2b cost recovery via LEVY on industry

13. Would there be actual or potential competition for the provision of this activity/program?
Yes

14. Cost recovery fee or levy set to achieve fully
distributed cost recovery

15. Would there be any additional data collection, analysis or
research beyond what is already taxed payer funded?
Yes

16. Provision of this activity/program involves the
further dissemination of a basic product.
No

* Cost Recovery Components
A - Salaries & O & M Costs
B - Operating Expenses
C - Overheads
D - Return on Assets
E - Profit Margin

Point 1: Market Failure Test
Point 2: Who Should Pay?
Point 3: Recovery Mechanism
Point 4: Costs Recovered
Point 1 - Market Failure Test

- Government intervention – one of two reasons:
  - social welfare; or
  - the presence of market failure

- Market Failure can include:
  - Externalities (Spillovers);
  - Public Goods (including Industry/Club goods); or
  - Asymmetric Information.
- Market Failure: Necessary but not Sufficient

  Justification requires:
  
  - Market Failure
  - A response action
  - Economically worthwhile (benefits > costs)

- Efficiency and Equity require appropriate cost recovery mechanism.
Point 2 - Risk Creators & Beneficiaries

- Efficiency is not a subjective choice!
  Involves a hierarchy between:

  Risk creators; (if not then)

  Beneficiaries; (if not then)

  Taxpayer funded.
Point 3 - Cost Recovery Mechanism

- Efficiency is not a subjective choice!
  Involves a hierarchy between:

  1. Fee on individuals; (if not then)
  2. Levy on industry; (if not then)
  3. Taxpayer funded.
Point 4 - Degree of Cost Recovery

- **Provision with No Cost Recovery**
  (Taxpayer Funding)

- **Provision with Cost Recovery @ Commercial Cost**
  \[(A + B + C + D + E)\]

- **Provision with Cost Recovery @ Fully Distributed Cost**
  \[(A + B + C + D)\]

- **Provision with Cost Recovery @ Avoidable Cost**
  \[(A + B + C)\]

- **Provision with Cost Recovery @ Marginal Cost**
  \[(A + B)\]

*Cost Recovery Components*
- A – Salaries & On Costs
- B – Operating Expenses
- C – Overheads
- D – Return on Assets
- E – Profit Margin
Salaries & On Costs + Operating Expenses + Overheads + Return on Assets + Profit Margin
Actions

1. Clearly Identify the Nature of the Problem

2. Devise Biosecurity Program or Activity

3. Conduct a Benefit Cost Analysis
Obstacles Encountered

- Problem definition
- Preconceived ideas
- Unfamiliarity with economic concepts
- Heterogeneity of proposed activities/programs
Conclusions

- Cost Recovery:
  - Should be Defensible, Repeatable & Transparent;
  - Is largely Objective;
  - Can be achieved through the application of this Decision Framework.
Thanks for Listening!

Any Questions?
Worked Examples

- Inspection by Fisheries Officers to obtain compliance with the various fisheries legislation.
Worked Examples

- Issuing Area Freedom Certificates administered by the Plant Product Integrity & Standards Unit

1. ACTION: Identify the nature of the problem
Then conduct a market failure test as below:

   1 (a) Externalities: would the biosecurity threat be likely to significantly affect those not directly involved in the risk spreading transaction? For example, the spread of a pest or disease.
   1 (b) Industry goods: would the private sector industry (or left unassisted) fail to provide an adequate level of investment to remove (or reduce to an acceptable level) the biosecurity threat? For example, an industry may fail to pay for a monitoring program (that provides industry benefits), due to lack of an appropriate collection/delivery mechanism.
   1 (c) Asymmetric information: Does one party to a transaction have more or better information than the other party in relation to the biosecurity threat, thus creating an imbalance of power in the transaction? (this includes “adverse selection” and “moral hazard”) E.g., sale of stock with OID!

2. ACTION: Devise a Proposed Biosecurity Program or Activity
The proposed intervention should be designed to overcome the specific market failure identified above (see notes) (the component parts of each activity/program should be considered separately through the remaining part of this diagram)

3. Would it be necessary to regulate for the provision of this activity/program? (e.g., to pursue impacts, establish industry levy, enforce compliance certification, etc.)

4. Do not provide unless industry requests government involvement and agrees to pay for the provision! (this may also require a regulatory basis)

5. Would the activity program involve “Registration / Approvals” or “Compliance / Enforcement”?

6. Would it be appropriate to recover costs from the individual risk creator or individuals firms? through a fee or fine, as opposed to recovering costs from an entire industry through a levy?

7. Would other individuals/firms be able to free ride on the approval of the first applicant?

8. Would the major beneficiaries be a narrow identifiable group? (e.g., individuals or industries)

9. Would charging an individual firm for the activity program be efficient and cost effective? i.e., are the affected parties identifiable, is there (or could there be) a fee collection mechanism in place and would the amount of money collected be likely to significantly outweigh the administrative costs of doing so?

10. ACTION: Conduct a Benefit Cost Analysis
Only proceed with options in which benefits are greater than costs

11. If the impacts of the biosecurity threat lie solely within one sector or industry, the responsible funding party (government/levy industry) may decide for the proposed biosecurity activity/program not to be provided. Otherwise...

Cost Recovery Components
- A - Salaries & On Costs
- B - Operating Expenses
- C - Overheads
- D - Return on Assets
- E - Profit Margin

12(a) cost recovery via FEE on individual firms
12(b) cost recovery via LEVY on industry
13. Would there be actual or potential competition for the provision of this activity program?

14. Cost recovery fee or levy set to achieve fully distributed cost recovery

15. Would the provision of this activity program involve additional data collection, analysis or research beyond what is already taxpayer funded?

16. Provision of this activity program involves the further dissemination of a basic product.