1.9. Threat: Pollution

Electronic reference
1.9 Threat: Pollution

1.9.1 Agricultural pollution

Based on the collated evidence, what is the current assessment of the effectiveness of interventions for agricultural pollution?

| Unknown effectiveness (limited evidence) | • Create walls or barriers to exclude pollutants  
• Plant riparian buffer strips  
• Reduce pesticide, herbicide or fertilizer use |
| No evidence found (no assessment)       | • Prevent pollution from agricultural lands or sewage treatment facilities entering watercourses |

**Unknown effectiveness (limited evidence)**

- **Create walls or barriers to exclude pollutants**
  
  One controlled study in Mexico found that installing filters across canals to improve water quality and exclude fish increased weight gain in axolotls. *Assessment: unknown effectiveness – limited evidence (effectiveness 35%; certainty 29%; harms 0%).*


- **Plant riparian buffer strips**
  
  One replicated, controlled study in the USA found that planting buffer strips along streams did not increase amphibian abundance or numbers of species. *Assessment: unknown effectiveness – limited evidence (effectiveness 0%; certainty 30%; harms 0%).*

  [http://www.conservationevidence.com/actions/819](http://www.conservationevidence.com/actions/819)
Reduce pesticide, herbicide or fertilizer use

One study in Taiwan found that halting pesticide use, along with habitat management, increased a population of frogs. *Assessment: unknown effectiveness – limited evidence (effectiveness 71%; certainty 26%; harms 0%).*

http://www.conservationevidence.com/actions/832

No evidence found (no assessment)

We have captured no evidence for the following intervention:

- Prevent pollution from agricultural lands or sewage treatment facilities entering watercourses

1.9.2 Industrial pollution

<table>
<thead>
<tr>
<th>Based on the collated evidence, what is the current assessment of the effectiveness of interventions for industrial pollution?</th>
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<tbody>
<tr>
<td>Trade-off between benefit and harms</td>
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<tr>
<td>No evidence found (no assessment)</td>
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</tbody>
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Trade-off between benefit and harms

Add limestone to water bodies to reduce acidification

Five before-and-after studies, including one controlled, replicated study, in the Netherlands and UK found that adding limestone to ponds resulted in establishment of one of three translocated amphibian populations, a temporary increase in breeding and metamorphosis by natterjack toads and increased egg and larval survival of frogs. One replicated, site comparison study in the UK found that habitat management that included adding limestone to ponds increased natterjack toad populations. However, two before-and-after studies, including one controlled study, in the UK found that adding limestone to ponds resulted in increased numbers of abnormal
eggs, high tadpole mortality and pond abandonment. *Assessment: trade-offs between benefits and harms (effectiveness 47%; certainty 50%; harms 50%).*

http://www.conservationevidence.com/actions/748

**No evidence found (no assessment)**

We have captured no evidence for the following intervention:

- Augment ponds with ground water to reduce acidification