

With the development of tools like RNAi,
in the future we may be capable of
eradicating species. If we can eradicate
a species, should we?

CON Position

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What do we mean by eradication?

Eradication: “worldwide eradication, not local elimination” - ESA SDS

Elimination: Removal of a species from a defined area, but not extinction

Eradication should never be attempted.

Elimination should be carefully considered on a case-by-case basis.

We have the tools now...

RNAi

Zhu *et al.* 2011

Gene drive

Sinkins and Gould 2006, Gould *et al.* 2008, Esvelt *et al.* 2014

Selfish genetic elements

Sinkins and Gould 2006

...but the question isn't whether we can,
but whether we should;

the ***ethics*** of eradication

Elimination has been
attempted ***many times.***

Successful ones have
been ***localized.***

Even local eliminations can have
unintended consequences.

Smith and Bangs 2009

Smallpox has been eliminated...

...but why haven't we eradicated it?
We have the ability.

We are keeping smallpox alive because
we may need it someday.

Geopolitical considerations

Cannot remove from ***social, political
or cultural*** context.

Priorities differ, may ***reinforce
inequalities***.

Doesn't address ***overall*** health.

Logistical considerations

Surveillance will be very difficult.
Targeting ***vectors*** instead of pathogen.
Benefits are ***exaggerated***.
Costs are ***underestimated***.

Crop pests and invasive species
have been targeted,
with ***uncertain consequences***

Myers et al. 2000

Ecological effects are uncertain:
Man-made extinctions on different time
scale than evolutionary ones.

Leopold 1948

Different ***value systems***,
what is a “pest”?

Lees and Bell 2008

Who decides?

Who ***should*** decide?

Who inherits the consequences?

Where does that leave us?

Elimination may be attempted in
certain circumstances.

Costs are *too high*,
benefits are *uncertain*, and
consequences are *unknowable*.

Eradication is ***not practical,***
not necessary,
not ethical.

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