

# Biomass crops: multiple benefits and end uses

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# Biomass crops / feedstocks



**SRC Willow**



**SRF Eucalyptus**



**SRC & SRF Poplar**



**SRF Alder**



**SRF Black Locust**

Short rotation coppice (2-3 yr)

Short rotation forestry (5-10 yr)

Perennial grasses and forbs (1 yr)



**Miscanthus**



**Switchgrass**



**Reed Canary grass**



**Sida**



**Silphium**



**Hemp**

# Biomass crops: current products and end uses

Current uses	Detail
Commercial power	Bales, chips and pellets
Commercial heat and power	Bales, chips and pellets
Domestic fuel for heat	Chips and pellets
Anaerobic digestion	Biogas
Domestic heat	Briquettes, fire logs and firestarters
Paper pulp	From willow / poplar
Animal bedding	Equine, poultry bedding
Animal fodder	Willow for livestock and zoo animals
Garden compost / Mulch	eg. willow compost
Construction materials	e.g. Miscanthus bale houses
Concrete-replacement materials	Miscrete, Econcreed, Hempcrete
Phytoremediation	Restoration of contaminated and degraded soil
Cosmetics & skincare	Salicylic acid and salicin in handcreams, shampoos etc.
Food supplements	Salixin



# Biomass crops: future products and end uses

## Future uses (in R&D)

Biomass with carbon capture and storage (BECCS)

### Anaerobic digestion

e.g. Green cane – new Miscanthus varieties

### Construction materials

Composite board, fibre board, plaster, render, insulation, concrete-replacement

Packaging & paper products

Textiles

Platform chemicals

Bioplastics, resins

Pharmaceuticals e.g. cancer therapy drugs

Bioethanol



# Biomass crops: environmental end uses

Current uses	Detail
Phytoremediation	Restoration of contaminated and degraded soil
Willow spilling	River and lake bank stabilisation
Willow faggots	Erosion control, leaky dams
Buffer strips	Erosion and reduced nutrient leaching
Water filtration / treatment	
Waste-water management	
Landfill leachate management	



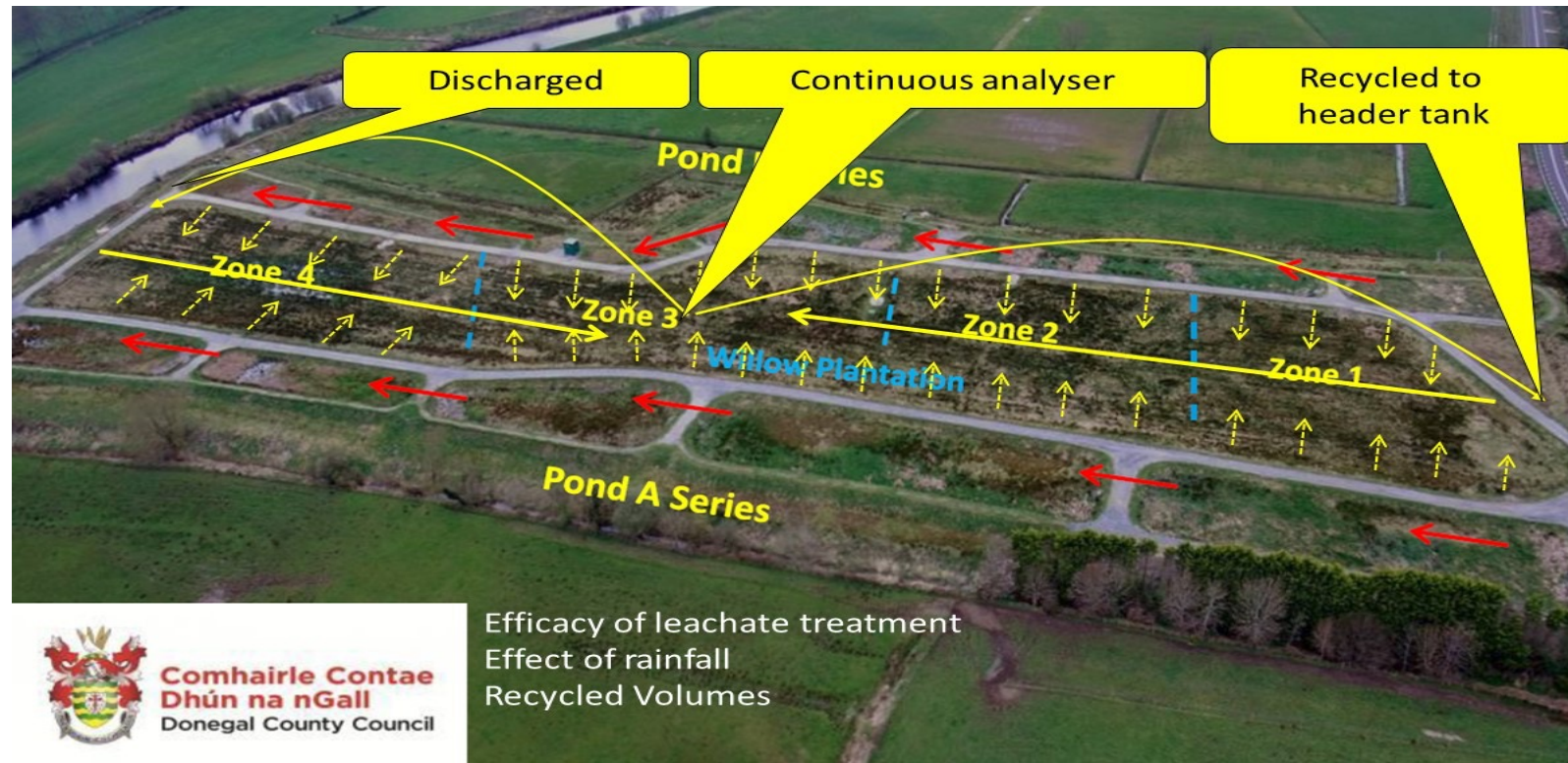
## Lough Neagh will remain seriously polluted for 20 years, even if we cut emissions — which are still increasing

Stormont officials set out gloomy prognosis for the source of 40% of NI's drinking water, but defend policies which have worsened its pollution

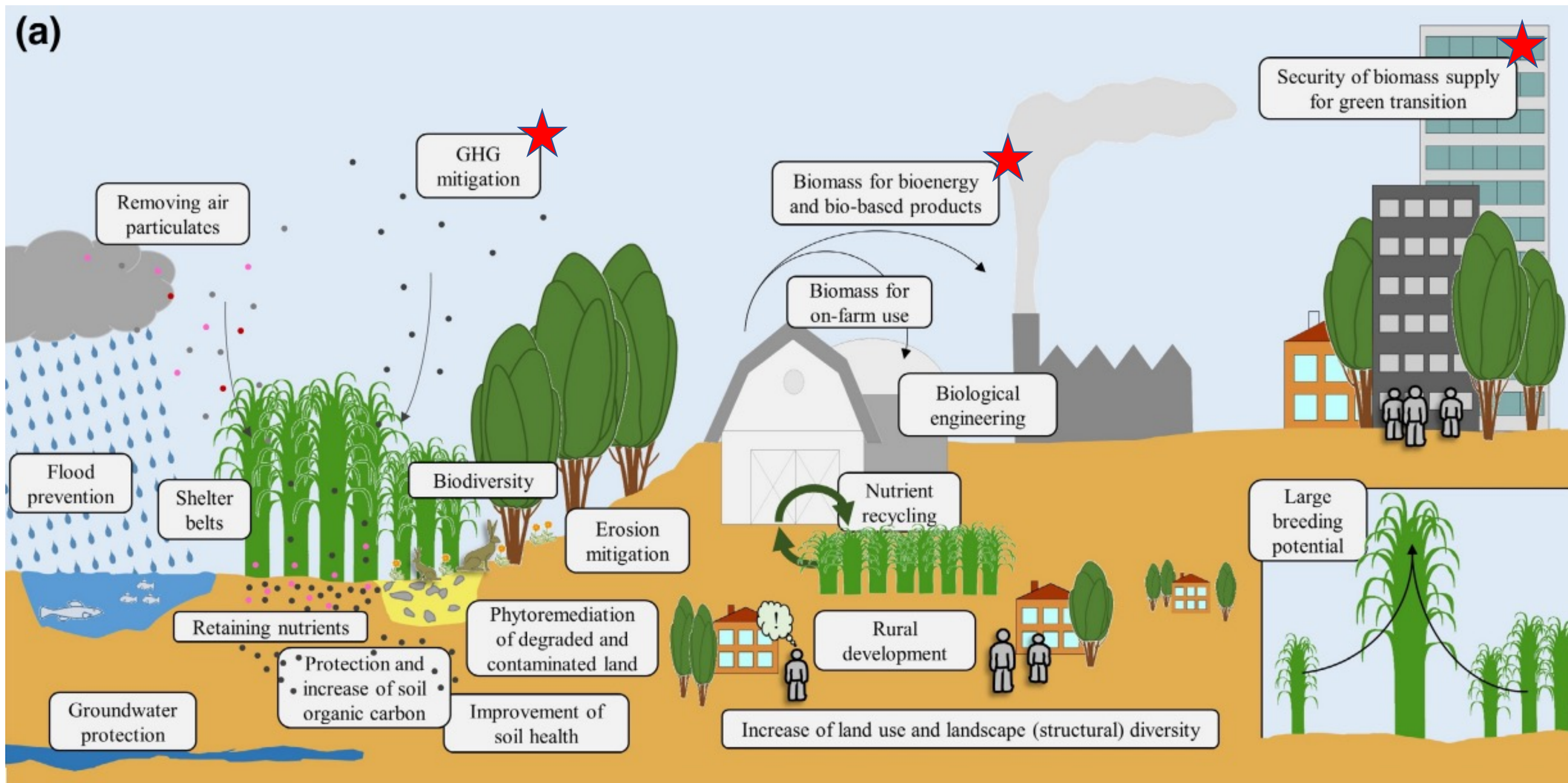


Blue-green algae sludge on the shores of Lough Neagh at Cranfield Point. Picture: Aodhan Roberts/Belfast Telegraph

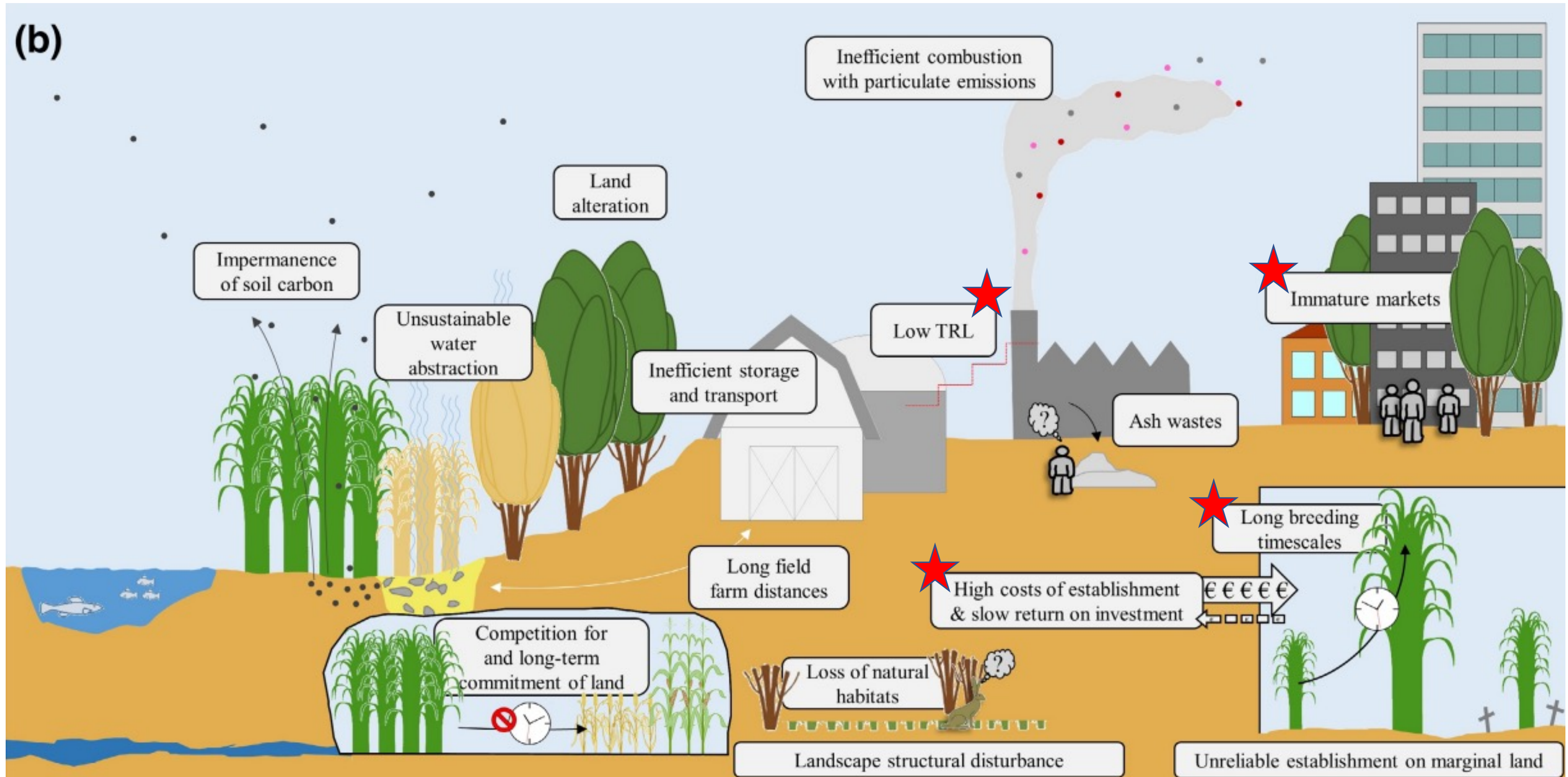
# Environmental platforms – waste / water



# Environmental benefits of perennial biomass crops



# Environmental disbenefits of perennial biomass crops







[biomassconnect.org](https://www.biomassconnect.org)

<https://www.biomassconnect.org/comms-newsletter-sign-up/>