Sea Container Structures - Risks

International Symposium: Optimising Sea Container Designs

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TOPICS

- Factors that make containers a suitable habitat
- Issues with a standard general-purpose container
- Domestic study to assess the differences between standard and modified containers
- CPM recommendations

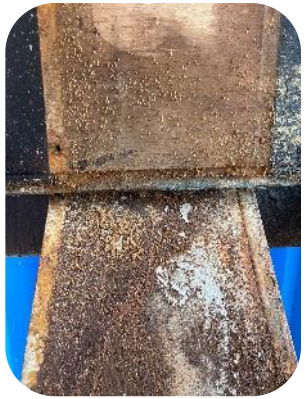
Factors that make sea containers a suitable habitat

- Food residues
- Moisture and condensation
- Dark and undisturbed spaces
- Gaps and openings
- Temperature and climate

Issues with a standard general-purpose container

Gaps between floorboard and container wall

Underfloor subspaces



Underside

Standard sea container (external) - issues

Underside Crossbeams

Vents

Standard sea container (internal) - issues

Subspaces

Sea container (internal) - issues

Access to sub-floor spaces

Cracks

Broken seals

Nail holes

Standard vs Modified containers – Is there a difference?

To assess the difference:

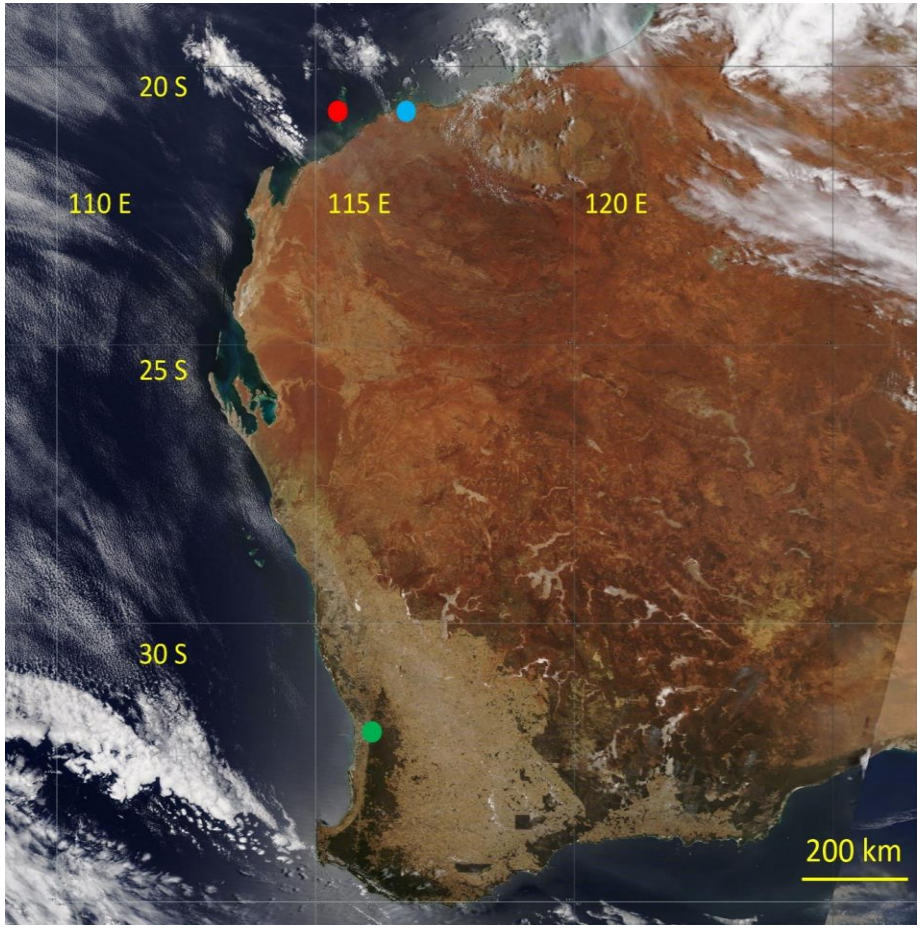
276 modified containers 523 standard containers

Contamination rate

Contaminant locations

Contaminant type

Level of contamination



Standard and modified containers used in the domestic supply chain

Standard

Modified

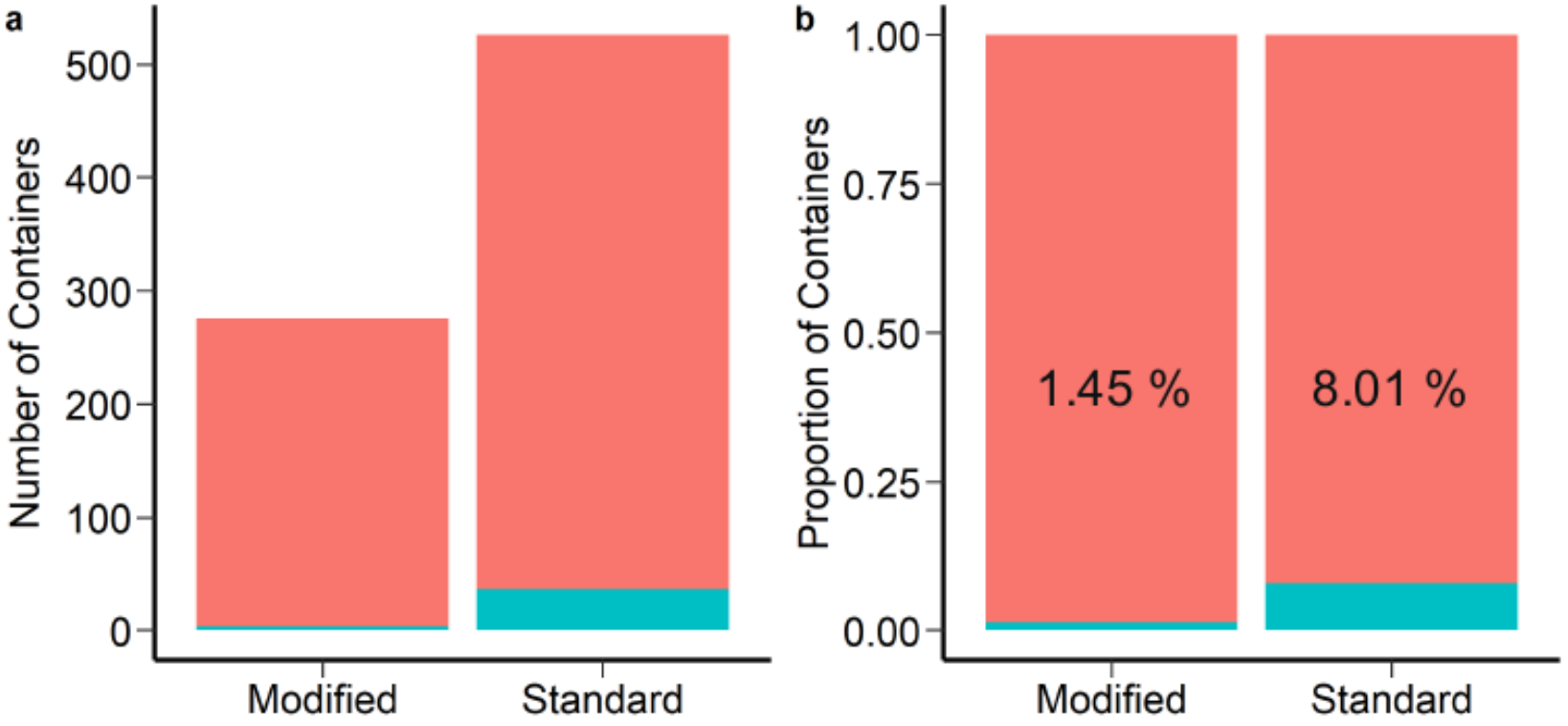
a

b

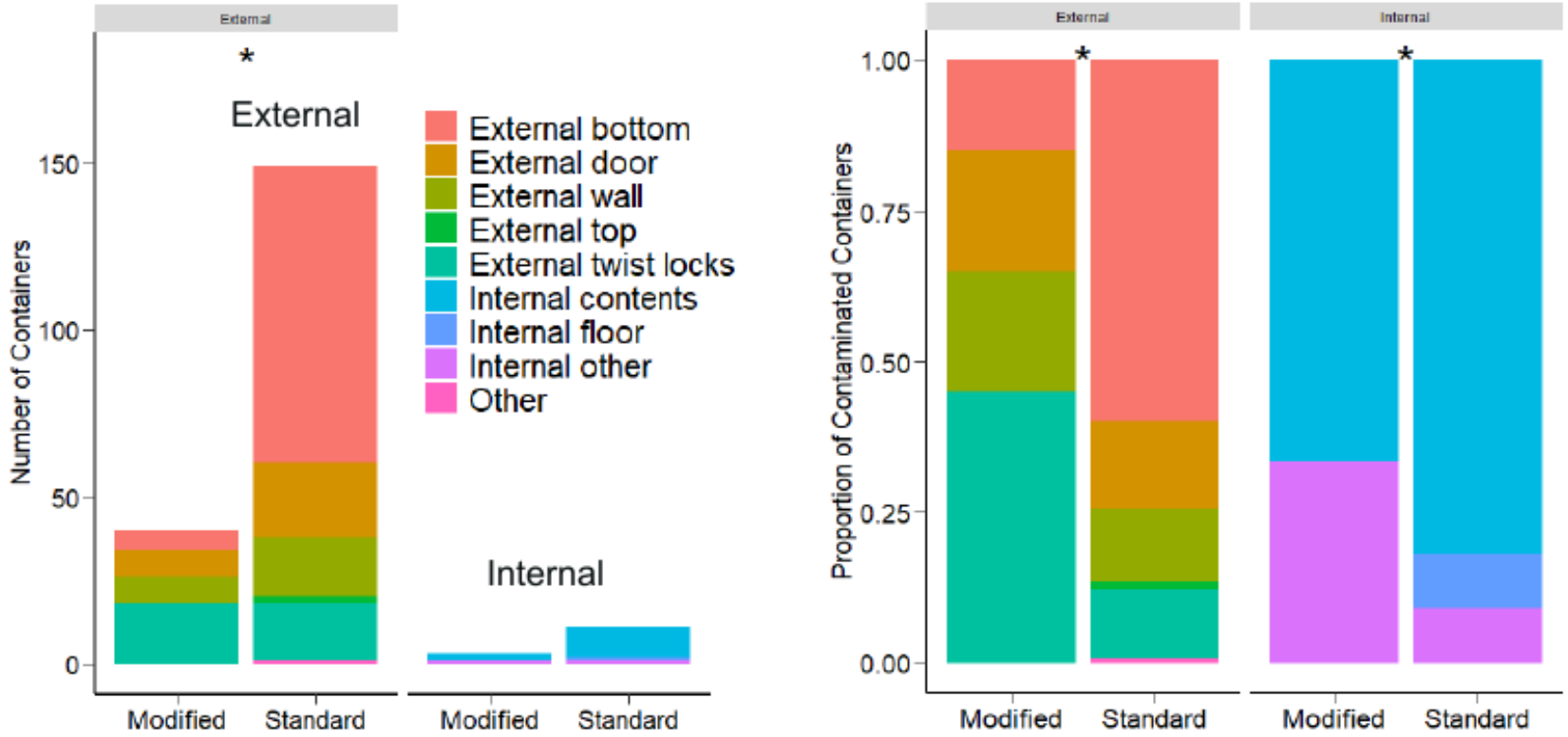
c

d

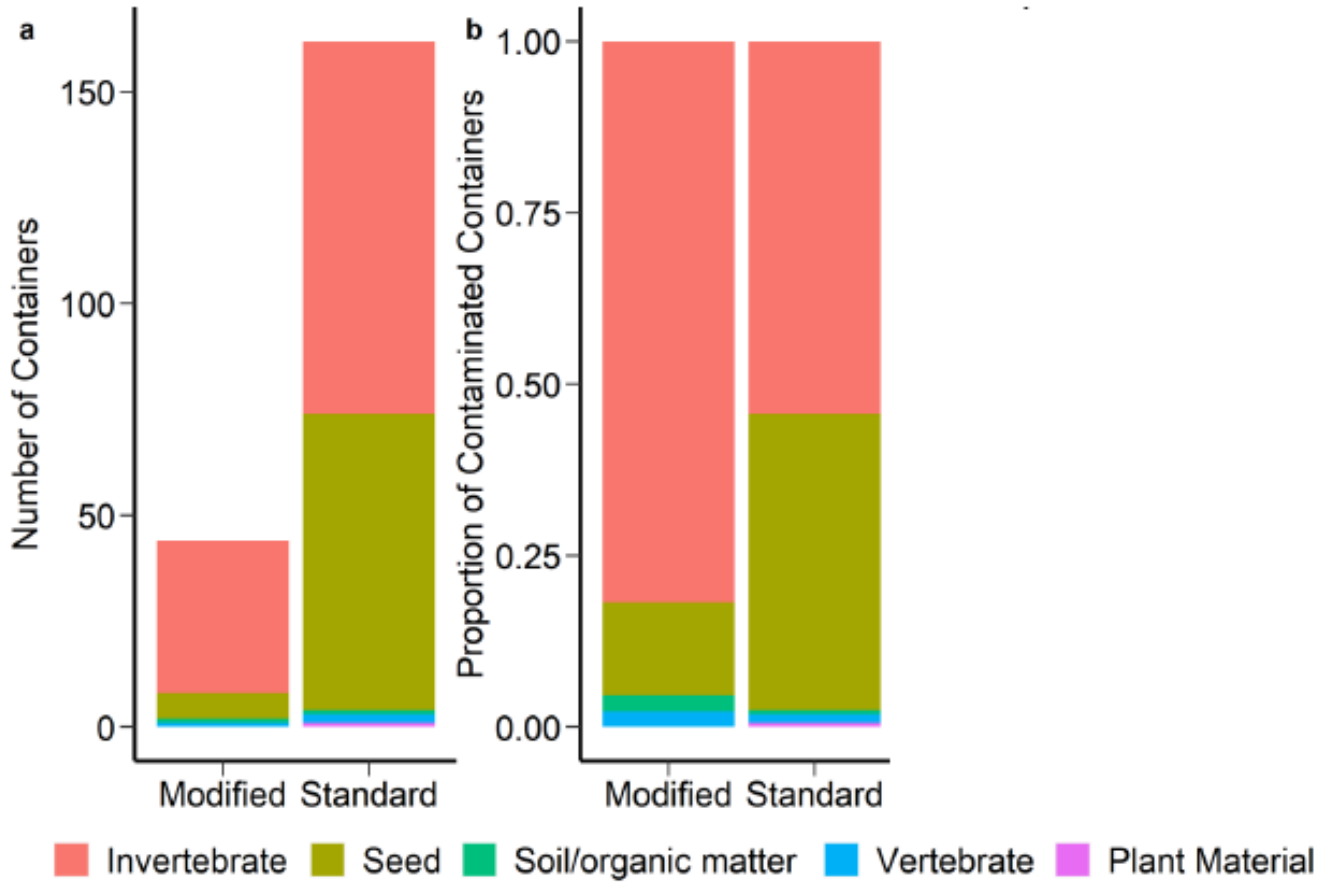
Contamination rate is higher in standard containers than in modified containers



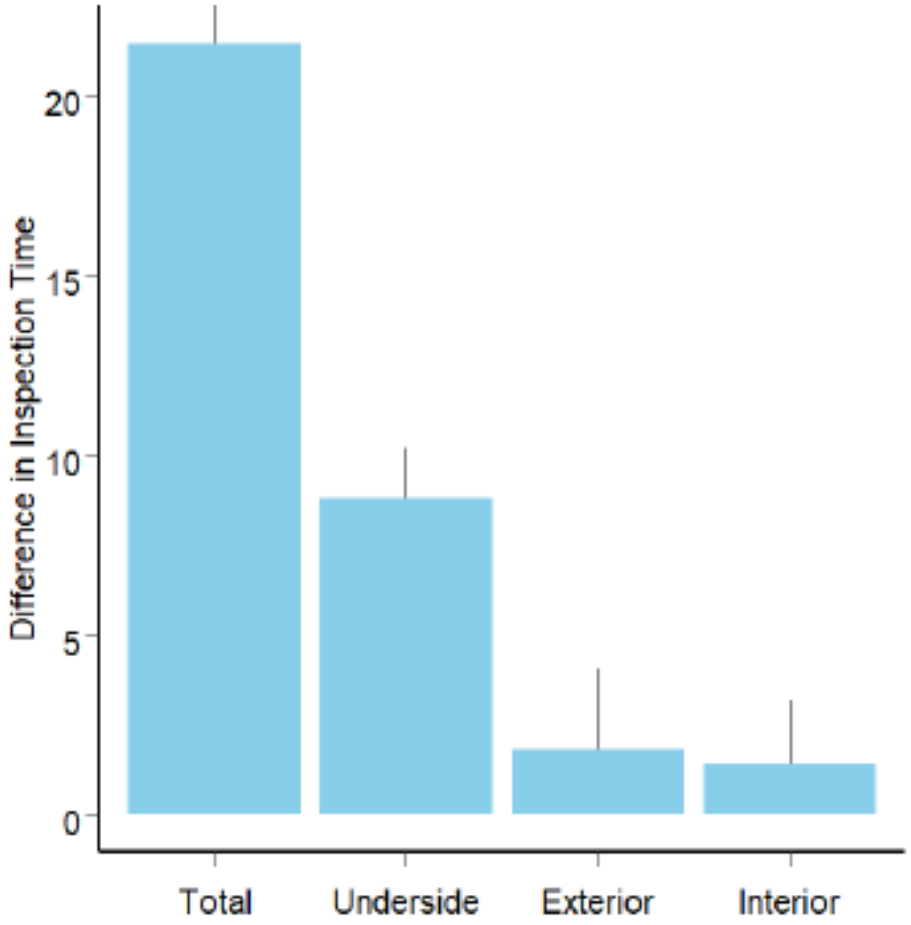
Location of contamination differs between containers



Type of contamination differs between containers



Average Additional Time Taken to Inspect Standard Containers



Major Outcomes:

1) Lower overall incidence of contamination on modified containers

2) Underside of modified containers much less prone to contamination

3) Reduced inspection times on modified containers

CPM Recommendations

1

Floor types that have no gaps, are less prone to developing cracks and crevices, and that are easier to clean

CPM Recommendations

2 Apply light-coloured coatings to container undercarriages to improve the detectability of pest contamination

CPM Recommendations

3 Modifications to undercarriages can contribute to further risk reduction

CPM Recommendations

4	More research into replacing current, bitumastic, undercarriage coatings to reduce their “stickiness”

Thank you

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