

Beach wrack - burden or chance?



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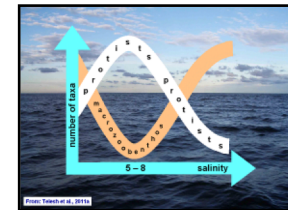
about „beach wrack“....



use of beach wrack



problems and restrictions



hopeless indeed?



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- *is regarded as a common problem along the Baltic coastline*
- *since the release of numerous regulations dealing with environmental aspects of management of near-natural systems traditional pragmatic attempts are not accepted anymore*
- *to solve these problems, many municipalities tried to follow the numerous promises made – with rather mixed success....*

„historical“ or „traditional“

- **fodder** for livestock, as already reported from the Romans

- **fertilizer** for poor sandy
or acidic soil, still practised

- **mattresses**, „peaking“ in
the first half of the 20th century and
being the only use of more than very
regional importance

- **insulation and
roofing material**

- **raw material for
extraction of
potash and, later,
iodine**

beach wrack use – more recent attempts

biogas production

cosmetics / propharmaceutics

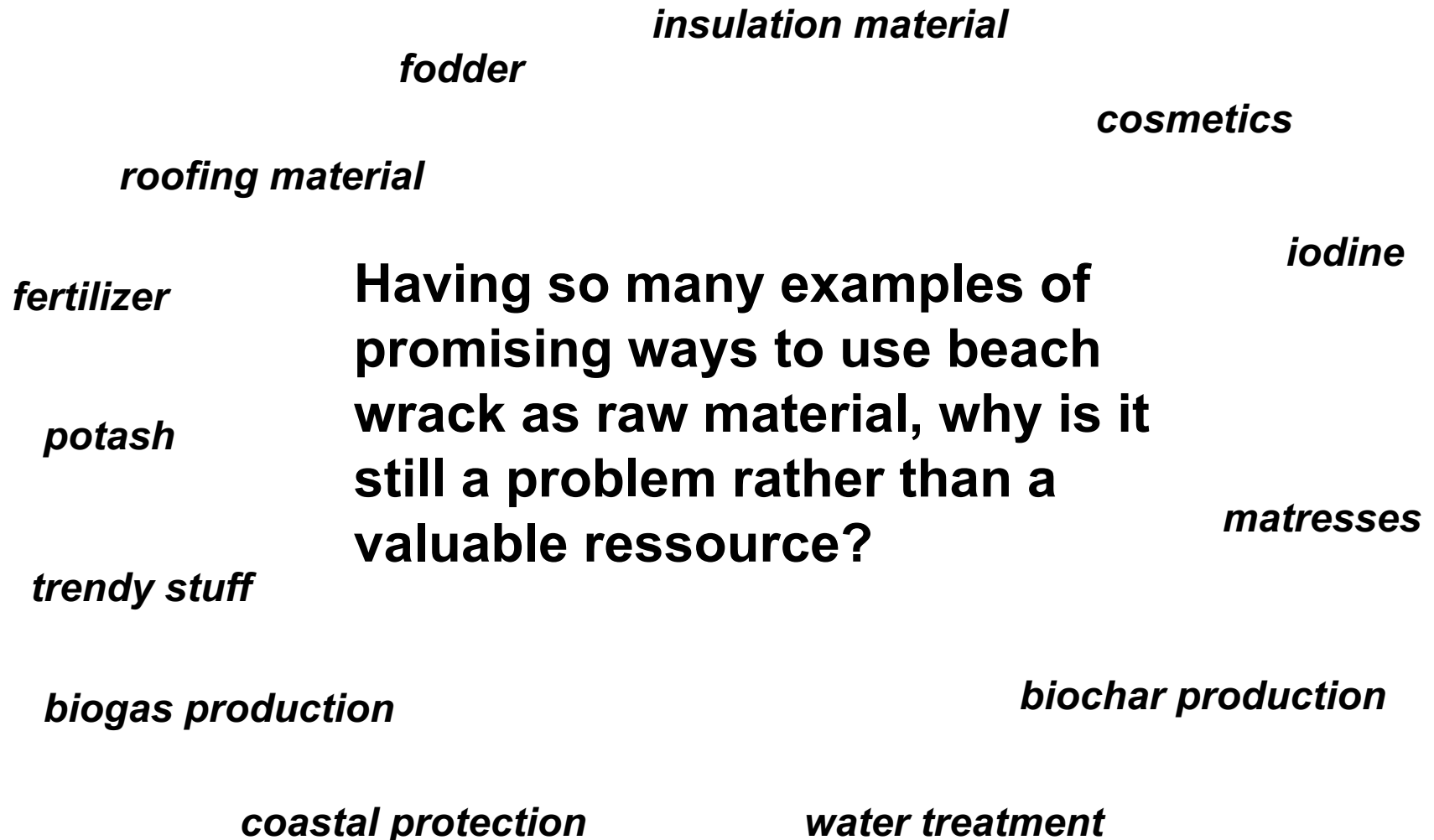
biochar production

coastal protection

water treatment

„trendy stuff“ (e.g. glasses, baskets..)

and all „traditional“ ones are revitalised again and again...



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**It's a mixture of all kind of seaborne material,
washed ashore – consisting of algae, mussels,
litter, crustaceans, driftwood... in various extents
depending from season, locality, storm direction
and strength**



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„beach wrack“ isn't seagrass!

**It's a mixture of all kind of seaborne material,
washed ashore – consisting of algae, mussels,
litter, crustaceans, driftwood... varying depending
on season, locality, wind direction, storm strength**



and „beach wrack“ isn't algae either!



almost pure brown algae aggregations - might be used for, e.g.
phycocolloid extraction – but aren't.... WHY?

Transport and processing costs!

Fazit: all products requiring pure material cannot be made from raw „beach wrack“

Such material must be gathered and processed – still by hand!



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2. because of seasonality....

Beach management is performed during high season only – storm episodes are mainly in late autumn and winter



3. because of legal restrictions....

Sea grasses are Red listed...

Zostera marina:

Deutschland: 3 (gefährdet),

Mecklenburg-Vorpommern: nicht gefährdet,

Niedersachsen: 2 (stark gefährdet),

Schleswig-Holstein: nicht gefährdet

Zostera noltei:

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International Union for the Conservation of Nature
(IUCN)



*In addition, several kinds of
habitat-protection!
(e.g. Natura 2000)*



3. because of legal restrictions....

Seagrasses as well as macrophyte meadows in general are of such an ecological importance, that even not red-listed species are still secured via habitat-protection

Habitat-engineering I: substrate for numerous epiphytes and epizoans

Habitat-engineering II: spawning ground (e.g. herring)

Hopeless?

Maybe not – but stay realistic.....

- Fertilizer (all kinds of)

For non-agricultural use and unregulated segments (e.g. Baltic Sea potatoe contest, soft shoulders, roundabouts....)

Again: beware of pollutants (and be aware of some sand.....)

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Close to it's natural function: supporting dunes.....

Hopeless? Maybe not – but stay realistic.....

- „water treatment“

This is pretty much at the edge of reason.....

85% water content; C:N:P of about 300:15:1

Large seaside communities, heavily impacted, gather about 3000 m³ / year – equivalent to 0.2 – 2 kg P removed..... to a cost of ~ 250.000 Euro....????



- „fodder“

*Well, not directly....
but after conversion?*



Fazit: Beach wrack is a problematic „ressource“ – can be used as bulk material for all purposes not requiring continous supply (and tolerating pollutants and salt)

All other fields (as far as listed above) require high quality, pure material and cannot rely on raw beach wrack as gathered by, e.g. municipalities.....

Would be very good to have a kind of best-practice guide to prevent a 5th (6th?) round of „reinventing bicycles“...

Thank you for your attention!

