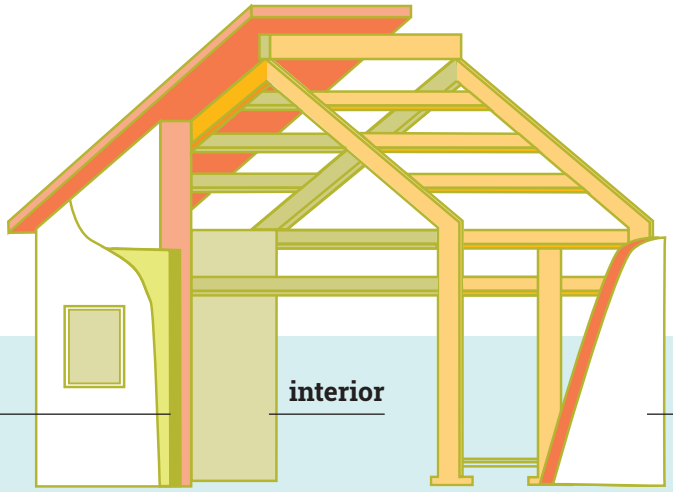
Sustainable Building Materials in Vietnam

dena project: “Vietnam – Building Transition” 2021 - 2022

dena German Energy Agency



reed insulation

resistance
- Relatively insensitive to moisture when correctly applied as internal insulation material
- External insulation needs to be protected against mould

positive env. impact
- Fully compostable
- Low energy consumption
- Carbon Negative

low availability

seaweed insulation balls

resistance
- Medium resistant to parasites and mould

positive env. impact
- Compostable
- Relatively low energy manufacturing
- Carbon negative

medium availability

typha insulation

resistance
- Relatively low moisture and mould growth sensitivity

positive env. impact
- Long life cycle
- Compostable and reusable
- Low energy manufacturing

low availability

rice straw board

resistance
- Mould resistant and possibly waterproof

positive env. impact
- Compostable and possibly reusable
- (Relatively) low energy manufacturing
- Carbon negative

high availability

plybamboo

resistance
- Protection from precipitation, fungi and insects is needed

positive env. impact
- High amount of renewable composition
- Relatively low energy manufacturing
- Recycling possible

high availability

wood fibre board

resistance
- Resistant to rotting, vermin, fungal attack
- Treatment needed for moisture resistance

positive env. impact
- High amount of renewable composition
- Recycling possible
- Low energy manufacturing
- Carbon Negative

high availability

rice straw bales

resistance
- Protection from weather is needed
- Risk of mould growth over long time

positive env. impact
- Carbon negative
- Fully renewable composition
- Compostable
- Low energy consumption

high availability

rammed earth

resistance
- Low risk to mould or parasites
- High level of workmanship needed to ensure minimum of weatheribility

positive env. impact
- Full recyclability possible
- Long life cycle
- Relatively low embodied carbon
- Low energy manufacturing

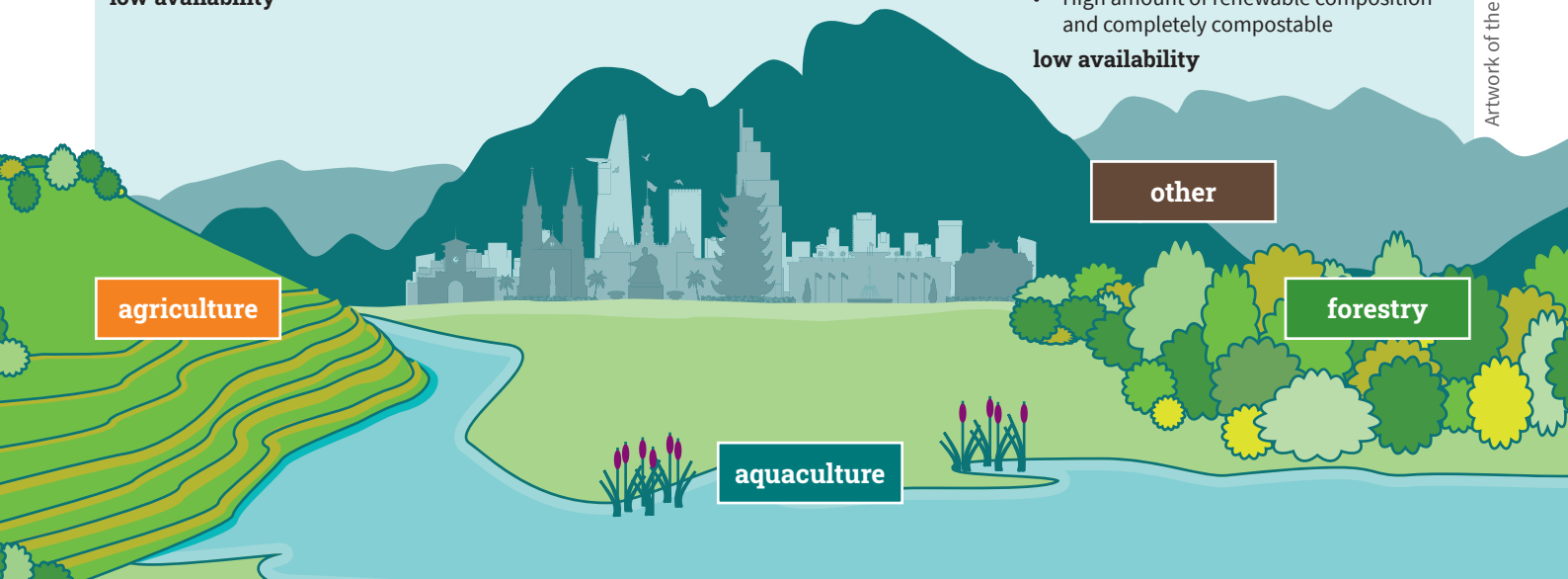
high availability

typha wall board (both)

resistance
- Relatively insensitive to mould growth or humidity

positive env. impact
- Long life cycle
- (Relatively) low energy manufacturing
- High amount of renewable composition and completely compostable

low availability



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