Time to restore ground permeability in our cities/towns.
Why?

1. Flood risk reduction and stormwater management

Impermeable surfaces prevent rainwater from infiltrating the soil. Instead, water runs off rapidly into drains, often overwhelming systems during heavy rainfall.
Re-permeabilising the ground:
- Slows down runoff
- Allows water to infiltrate and recharge groundwater
- Reduces surface flooding and combined sewer overflows

This is increasingly critical as intense rainfall events become more frequent, a trend highlighted in global urban climate assessments .

2. Cooling cities and reducing urban heat islands

Sealed surfaces absorb and re-radiate heat, driving the urban heat island effect.
Permeable and vegetated surfaces:
- Retain moisture, enabling evaporative cooling
- Lower surface and ambient air temperatures
- Improve thermal comfort in streets and public spaces

3. Restoring the urban water cycle and groundwater recharge

When cities are fully sealed:
- Groundwater levels drop
- Urban vegetation becomes dependent on irrigation
- Cities become more vulnerable to droughts

Permeable soils help reconnect rainfall with natural hydrological cycles, improving long-term water security - especially important in water-stressed cities .

4. Supporting urban biodiversity and soil health

Healthy soils host microorganisms, insects, and plant roots. De-sealing and permeable design:
- Improve soil respiration and fertility
- Enable urban trees to grow deeper, stronger roots
- Support pollinators and micro-habitats

5. Equity, livability, and informal settlements

In many cities:
- Informal settlements are located in flood-prone, poorly drained areas
- Hard engineering solutions can displace communities

Permeable, nature-based approaches (bioswales, vegetated drainage, de-sealed courtyards) are:
- Cheaper and more adaptable
- Easier to co-design with communities
- Less likely to trigger displacement or “green gentrification”

6. **What “re-permeabilising” looks like in practice**

- Permeable pavements and parking areas
- De-paving sidewalks, schoolyards, and underused spaces
- Rain gardens, bioswales, and infiltration trenches
- Urban trees with structural soils
- Restoring natural streams or seasonal waterways