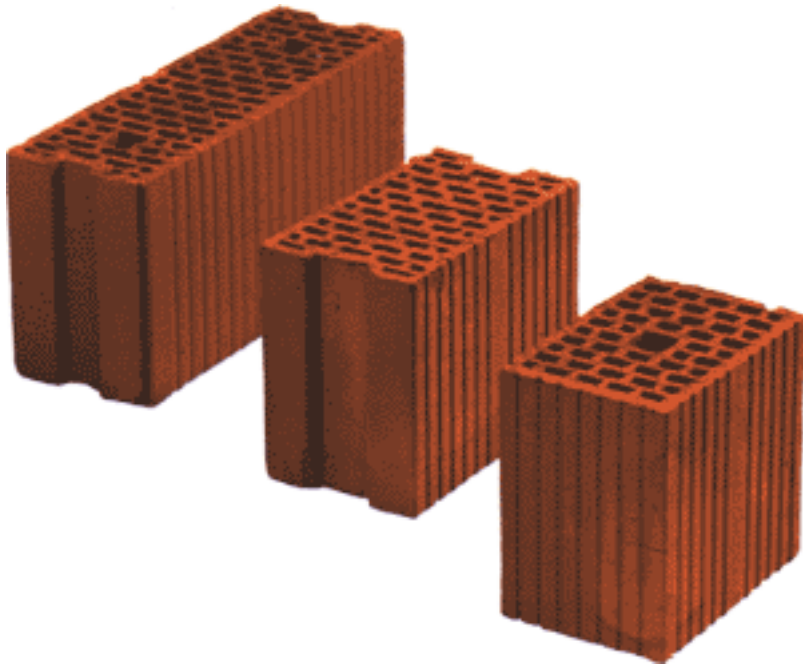


Integrated Resource Management in Asian Cities:

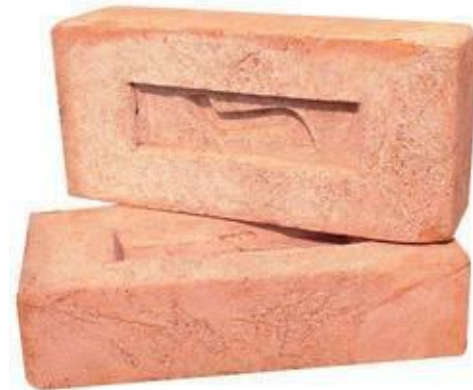
THE URBAN

nexus

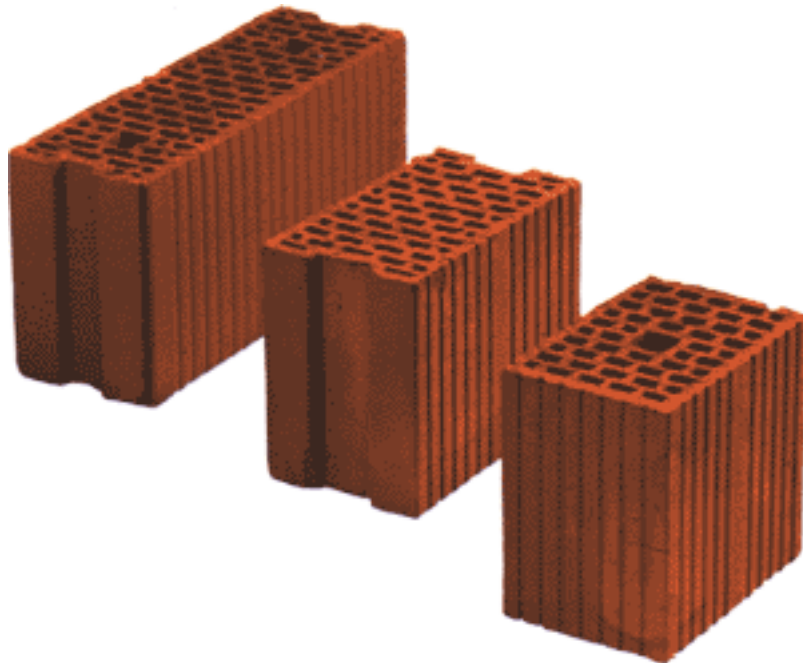




nexus Solutions in Practice



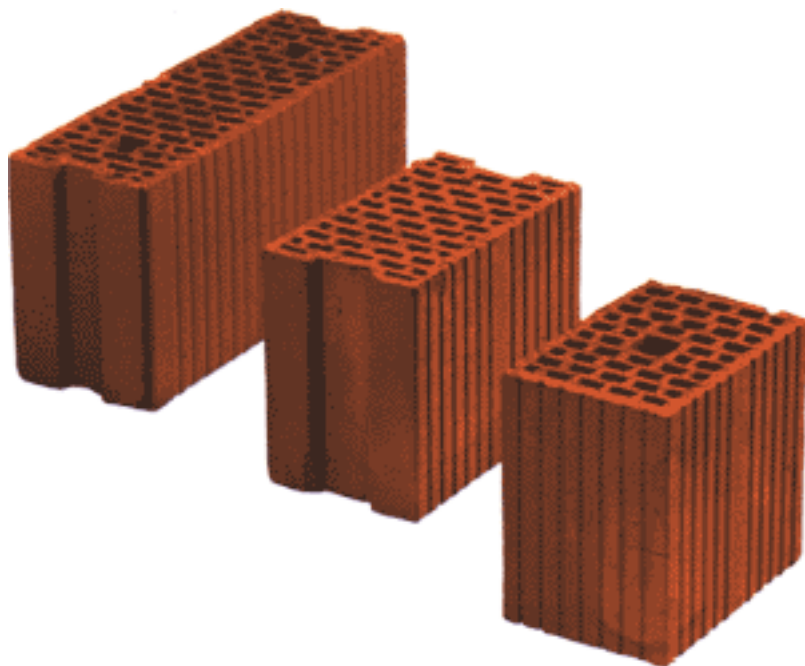
What are the differences in between the clay bricks?



nexus Solutions in Practice



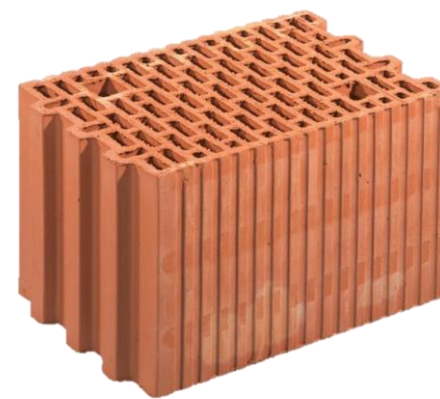
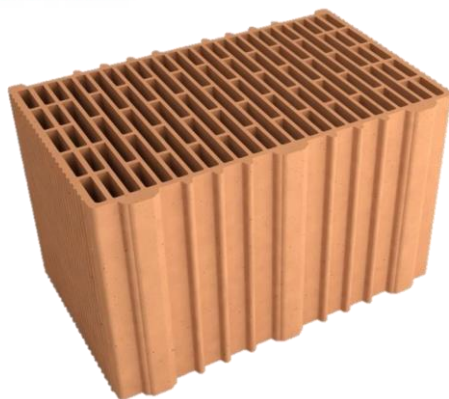
These are **nexus** clay bricks!!!



nexus Solutions in Practice



WHY are these **nexus** bricks?



nexus

bricks need:

30 – 50%

- Less land for raw materials (clay)
- Less water consumption
- Less burning fuel

nexus

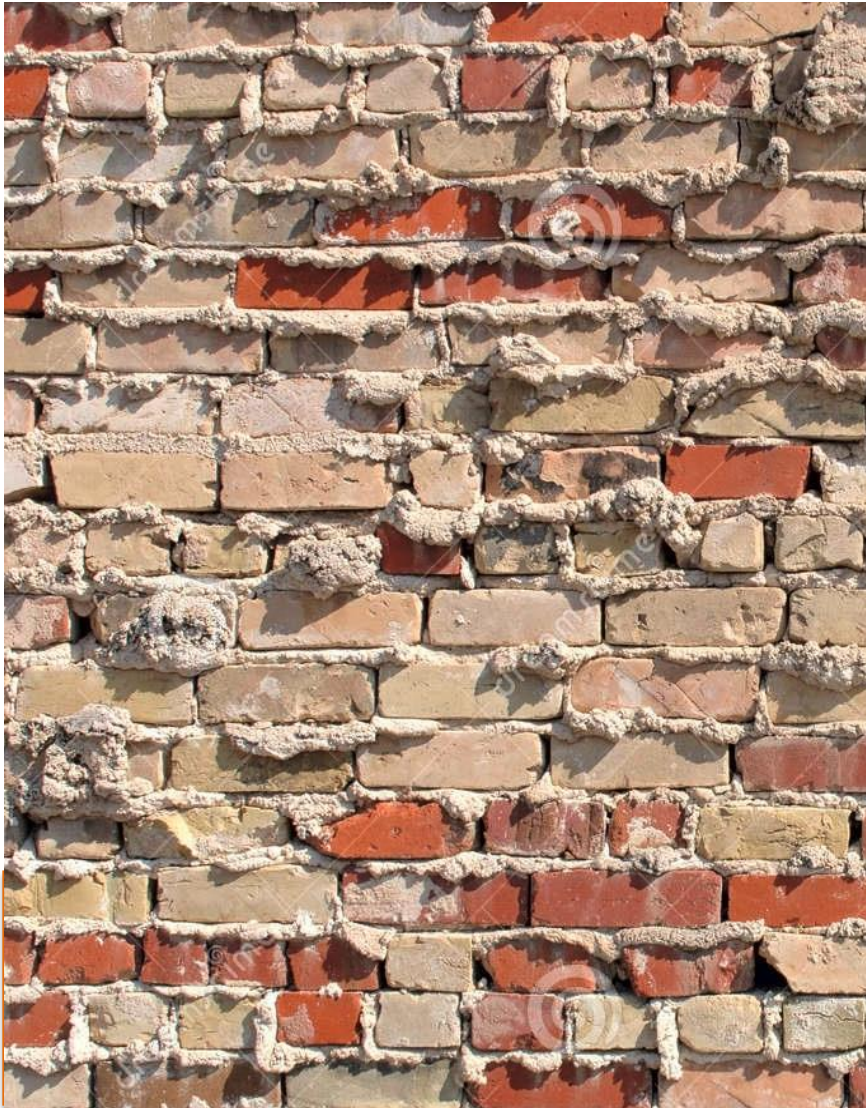
bricks have:

30 – 50%

- Less transportation cost (fuel)
 - for raw material
 - for brick delivery
- Less operation cost (mixing, etc.)
- Less CO2 emissions
- Less labor cost

Clay Brick production & CO₂ Emissions







Since many bricks can be reused after the earthquake, it turns out that the weakest part of a wall are the mortar layers.

Less joints = Higher stability =
Longer lifetime



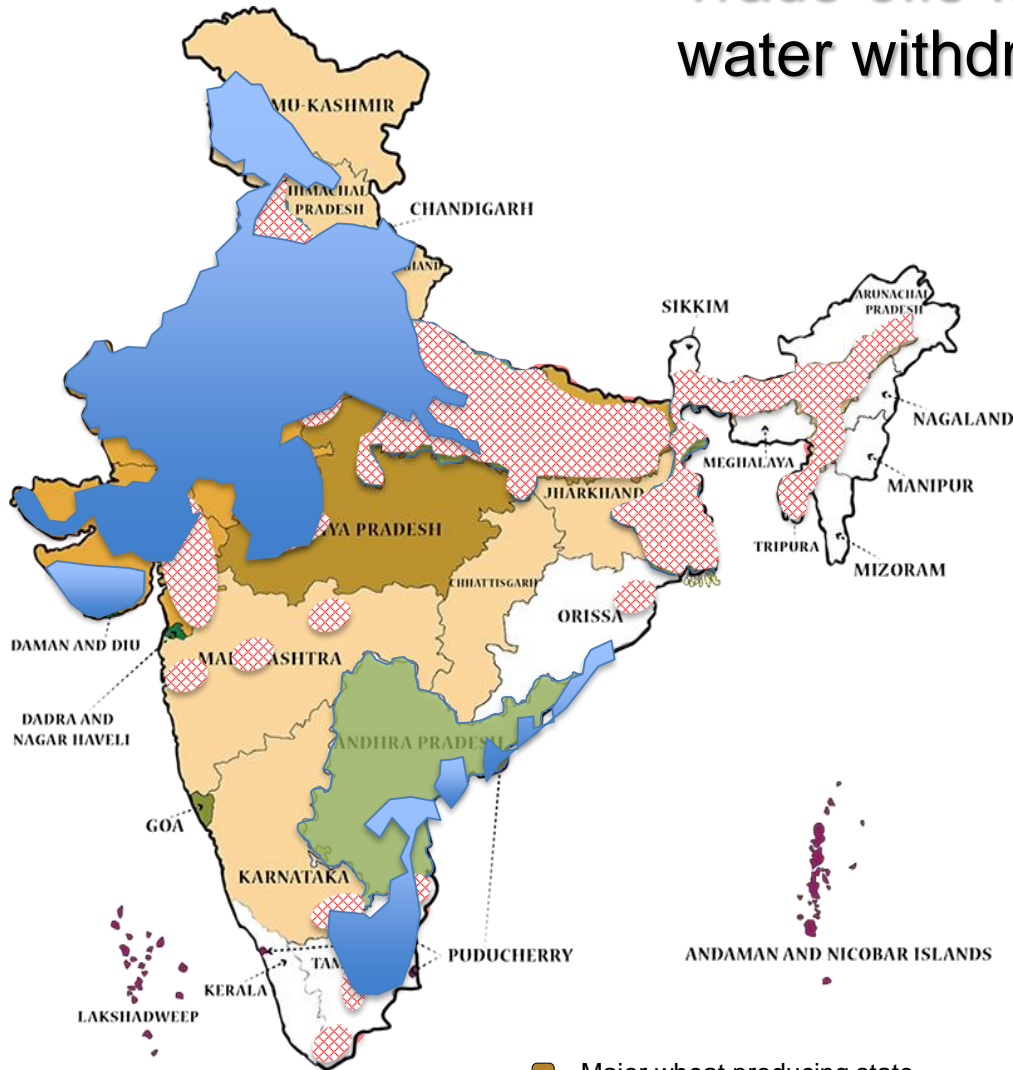


Why are savings on water, land and energy so important?

Trade-offs with regard to land use & water withdrawals

Sample from India

Trade-offs with regard to land use & water withdrawals/available supply



Competition between companies, farms and people for surface water in rivers, lakes, streams, and shallow groundwater.

Almost 600 million people are at higher risk of surface-water supply disruptions.

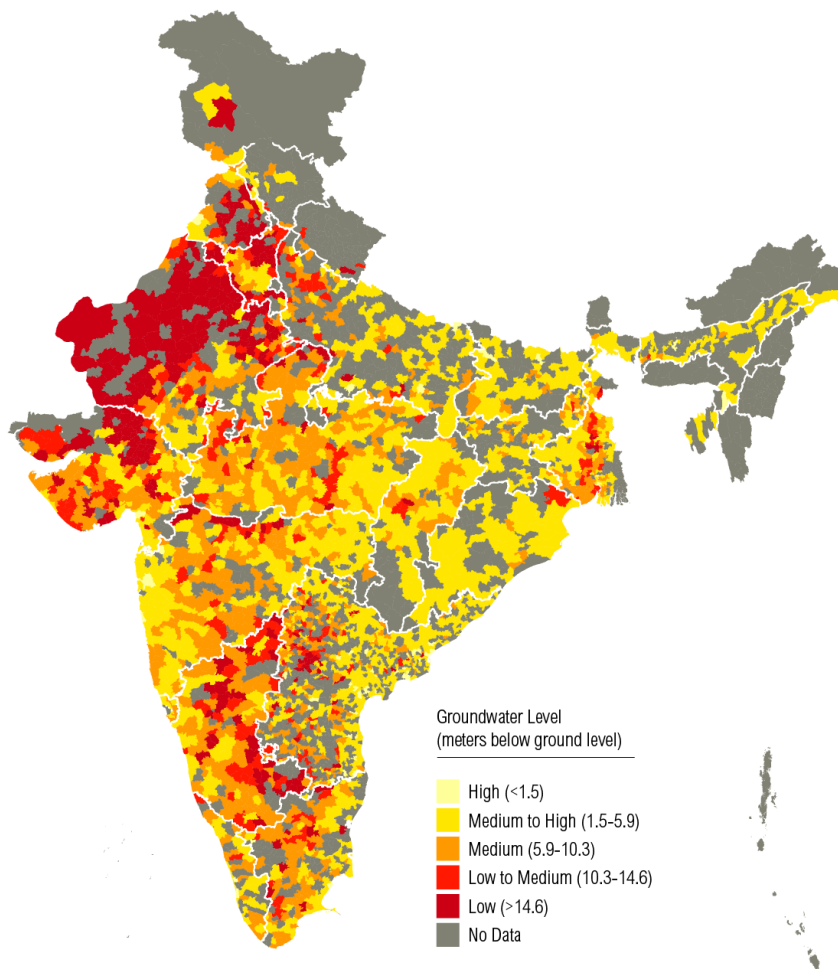
- Major wheat producing state
- Major rice producing states*
- Large scale brick
- Water stress extremely high, >80% withdrawals/available supply***

* farmer.gov.in

** ecobrick.in

*** world resources institute

54%
of India's
Ground-
water
Wells Are
Decreasing



The map shows
groundwater changes
in India during 2002-
08, with losses in red,
based on GRACE
satellite observations

- Less transportation cost (fuel)
- Less burning fuel
- Less CO2 emissions

less land used

- Less water consumption

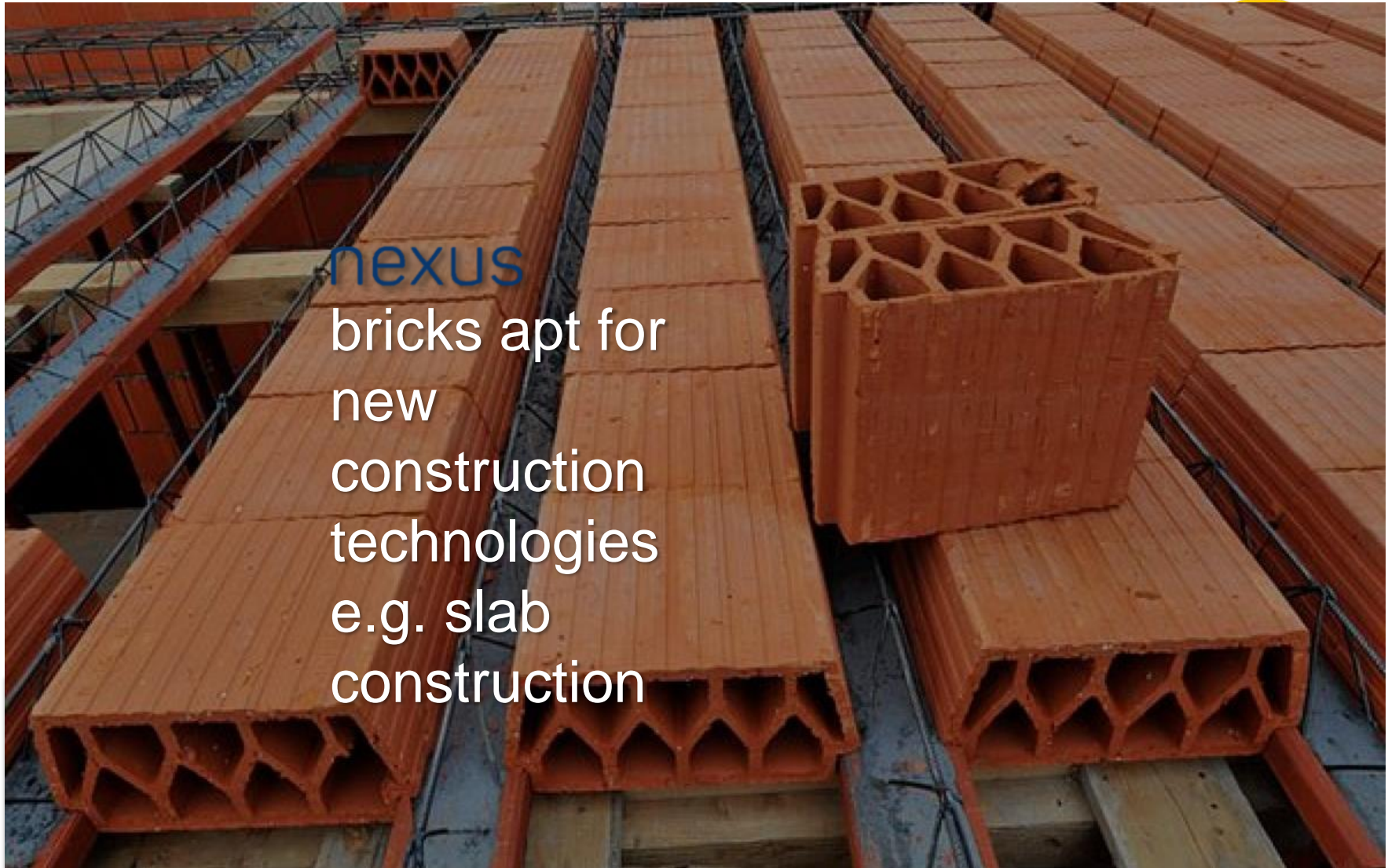
THE URBAN

nexus



Solution:

Change of building material products and there production method



nexus
bricks apt for
new
construction
technologies
e.g. slab
construction

nexus Solutions in Practice



nexus

bricks apt for new
construction technologies:

e.g. Slab construction

- Reduced mechanization on the construction site
- Simple, quick and economical construction method
- Reduced proportion of concrete and reinforcement
- Optimized fire und sound protection
- Simplified installation of electrical installation





Thank You!