GREEN HOMES:
Promoting Sustainable Housing in Nepal

Presented by:
Padma Sunder Joshi
Team Leader, Green Homes Project

The SWITCH-Asia Network Facility is funded by the European Union
Green Homes: Promoting Sustainable Housing in Nepal

presentation points

- The context
- Introducing Green Homes Project
- The Green Components
- Activities
Green Homes: Promoting Sustainable Housing in Nepal

• The Context
  • Introducing Green Homes Project
  • The Green Components
  • Activities
Why Green Homes?

The rapid urbanisation demands lots of housing stock in urban areas.
Green Homes: Promoting Sustainable Housing in Nepal

Why Green Homes? Key concerns

• In Nepal urban growth rate is one of the highest in Asia

• Nepal needs more than million additional urban housing to cater its increasing population in this decade

• The challenge is how to make it sustainable
Green Homes: Promoting Sustainable Housing in Nepal

Why Green Homes? Key concerns

- Buildings account for more than 1/3rd of total energy use worldwide (UNEP, SBCI, 2008)

- Buildings are responsible for approximately 30% of greenhouse gas emissions in cities worldwide (OECD report)

- Energy use and carbon emissions occur at different stages of the building cycle
What are Green Homes?

- Green Homes emit fewer greenhouse gases, consume less energy, use less water, and offer occupants healthier environments than do typical buildings.
- Green Homes use salvaged, recycled or low carbon materials.
- They support rainwater harvesting,
- solar heating, natural ventilation, and/or many other environmentally friendly practices.

- We are talking about the five eternal elements, the *Panch Tatwo*
  o earth   o water   o fire   o air   o sky
Green Homes: Promoting Sustainable Housing in Nepal

- The Context

- **Introducing Green Homes Project**
  - The Green Components
  - Activities
To create enabling policy environment to promote sustainable housing;

To strengthen supply chains for sustainable housing and building capacity of SMEs to deliver household level green technologies and services; and

To stimulate demand for sustainable housing
Green Homes Project Approach

- Supply chain analysis
- Capacity building
- Policy facilitation
Launching and Introducing

• Launched on May 3, 2013
• Three orientation programmes were later organized in the three participating cities viz. Lalitpur, Pokhara and Dharan.
Green Homes: Promoting Sustainable Housing in Nepal

• The Context
• Introducing Green Homes Project

• The Green Components
• Activities
Green Homes: Promoting Sustainable Housing in Nepal
Green Homes: Promoting Sustainable Housing in Nepal

Green Construction Materials

- CSEB
- Hollow concrete block
- Earth rammed
- Bamboo
- Strawbale
Green Homes: Promoting Sustainable Housing in Nepal

Passive Solar Design

1. Cross ventilation
2. Stack effect

Summer
Winter

45% of 'H' for latitudes up to 27.5° [Brisbane]

from 30% of 'H'

South

Fresh air

Warm air
Energy Efficiency

Green Homes: Promoting Sustainable Housing in Nepal
Green Homes: Promoting Sustainable Housing in Nepal

Water Conservation
Waste Management
Green Homes: Promoting Sustainable Housing in Nepal

- The Context
- Introducing Green Homes Project
- The Green Components
- Activities so far....
Green Homes: Promoting Sustainable Housing in Nepal

Enabling Policy Environment

- Supporting to develop Green Building Guidelines and Building Code
  - under preparation
- promoting sustainable housing in municipal development plans and building by-laws
- developed implementation plan to promote green homes
- establishing Counselling Centres in each municipality
- Introducing green labelling system
Green Homes: Promoting Sustainable Housing in Nepal

Outreach and Dissemination

- Participation in Eco-fairs and Industrial fairs to reach to general public and extend networking with SMEs
- Organized Eco-learns and Eco-visits.
- Media campaign
- Partnering with other Switch Asia projects
Capacity building and training

• National level training for decision makers from Government and municipalities
• Training for urban poor on sustainable construction materials as Green Jobs
• Training for urban women on water, waste water and solid waste management at household level including urban agriculture.
Green Homes: Promoting Sustainable Housing in Nepal

Capacity building and training

- Learning from European experiences
  - State of art technologies
  - Policy tools
  - Management experiences
- Exposure visit to the Netherlands
Success story of a SME

- Hari Karki a SME trained to make hollow concrete block 8 months ago
- Replacing burnt brick by hollow concrete blocks
- Invested NPR 300,000 now increased his earning from NPR 500,000 to 1,300,000
- Employing 15 youths
- Thinking of expanding the industry.
- Output of consumer education and SME training
Green Homes: Promoting Sustainable Housing in Nepal

Urban Agriculture - a byproduct

- Food security
- Community living
- Waste management
- Family economy
- Climate change adaptation & mitigation

Urban Agriculture
Green Homes: Promoting Sustainable Housing in Nepal

Urban Agriculture- a by product