Bamboo Design and Construction in the Philippines: 
the Cabiokid Experience
Overview

1. Bamboo and its appreciation
2. Geographical distribution
3. Species and construction
4. Bamboo and Cabiokid
5. Sample of bamboo construction
6. Innovations and Techniques
7. Other fields of exploration
8. Challenges and Conclusion
Bamboo usage in the Philippines
62 species
climbing/clumping species
21-endemic
6 – commercially used
3 – used for construction

Bamboo in the Philippines
EDGE PLANTS in RAINFORESTS

Bamboo in the Philippines
Bamboo in the Philippines

Naturally occurs along riverside
Bamboo – Rainforest Distribution

**Humid tropical climate**

7.1M hectares (23.9% of total land area)

Bamboo 39,000-52,000 hectares (estimated)
PERMACULTURE = ENERGY + PATTERNS

90 km North of Manila
Permaculture development site
Rice production province
Bamboo propagation site
Kawayan Tinik
Bambusa blumea

Buho
Schizostachyum lumampao

Bayog
Bambusa blumeana luzonensis

Bamboo species
OTHER NATURAL MATERIALS

- BAMBOO BUILDING
- MUD
- RATTAN
- GRASS ROOF
- PALM LEAVES
- FIBER
- VINES
- WOOD
Connect to natural elements
Soaking – 2 weeks

Traditional preparations in Bamboo
Skinning – humidity control - beauty

Traditional preparations in Bamboo
LIFE SPAN-HEIGHT-TOPOGRAPHY

Traditional structural methods
Traditional preparation techniques

JOINTING-SPLITTING-BEATING-WEAVING
TYING-LASHING

Traditional preparation techniques
Traditional Roof Structures

ROOF = STEEPER → BETTER
Promotion
Protection
Production
Processing

Bamboo Architecture
DESIGN FOR - EDUCATION

Bamboo Projects
Community-Based Learning Resource Center, TUMANA – Tiwi, Albay
DESIGN FOR - HABITAT

Bamboo Projects
LIVING SPACES – 10 - FOREST

Social “Tent” Houses
Geodesic Dome building
RECYCLE - COLLECT – USE – SLOW DOWN

RAINWATER HARVESTING
DESIGN FOR - MOBILITY

Bamboo Projects
BAMBOO E-TRIKE
• Growing bamboo in different environments
  – more water – faster - thin
  – Less water – slower - thick

• CAREFUL COMBINATION OF MATERIALS

• BUILDING CODES / LAWS

BAMBOO BIKES
CONCLUSION

Old habits – old technologies

Old habits – new technologies

New habits – new technologies
IMPROVE BIODIVERSITY
CONNECT TO LOCAL SPECIES → KNOWLEDGE
USE NATURAL MATERIALS

CONCLUSION
CONCLUSION

SMALL-SCALE
USE NATURAL MATERIALS
CREATE LOCAL ECONOMIES
AIM FOR MULTIFUNCTIONALITY
GROW AND IMPROVE COMMUNITY
FORESTS
ATTITUDE

CONCLUSION
THANK YOU FOR LISTENING