USEED

1. Community-centered NBS

2. Use of Natural Materials

3. NBS + Social & Institutional Frameworks

4. Where are we now / going?
1. COMMUNITY-CENTERED NBS

Local economic develop. Public health Security Recreation Environment
NATURAL SOLUTIONS + WATER MANAGEMENT + EROSION CONTROL + REVEGETATION + OPEN SPACE PROTECTION

INFRASTRUCTURE Verte

DESABLEUR + PIEGES A DECHETS

ARbre URBAIN

REFORESTATION

ARbre URBAIN

SOLUTIONS DE REDUCTION DE LA VITESSE + AUGMENTATION DE L'INFILTRATION

TOITURES VERTES

JARDINS POTAGERS

LA REVEGETALISATION POUR LE CONTROLE DE L'EROSION

RIGOLE

CHAUSSEE PERMEABLE

FERMES URBAINES

PLAINE D'INONDATION

COMPLEMENTARY STRUCTURAL SOLUTIONS

ELARGISSEMENT DES BERGES DU FLEUVE

CAP DE LA DECHARGE

DIGUE

MURS DE CONTENTION
MULTI-FUNCTIONAL SPACES

HEALTHY SPACES

SPACES THAT PROMOTE ECONOMIC DEVELOPMENT

SPACES TO CONNECT PEOPLE AND SERVICES

INCLUSIVE SPACES FOR ALL

SAFE SPACES

SPACES THAT IMPROVE WELL-BEING

PERMANENCE
CONTemplation
POINTS D'OBSERVATION
ESCAPES OMBRAGES
ZONES DE JEUX POUR ENFANTS
ZONES DE JEUX POUR ADULTES
ESCAPES DE RENCONTRE

ESPACES MAIDAN
ESPACES DE VENTE
ESPACES DE FABRICATION
EXTRACTION DE SABLE

RUIES COMPLETES
TRANSPORT NON MOTORISÉ
PEDESTRIEN CONNECTIVITÉ
TRANSPORT PUBLIC MULTIMODAL
CENTRE DE TRANSPORTATION

ESPACES DE FORMATION
ÉQUIPEMENT PUBLIC
INTEGRATION DES ENTRÉES DES ÉQUIPEMENTS PUBLICS
Opportunity:
Briquette Production

Opportunity:
Compost Production

Opportunity:
Recycling

Prevent Deforestation
Support existing urban agriculture
Pollution control
Public Health

Enhance Livelihoods
Protection of Flood plain
Maintenance of Public Space
Food security
Waste management

OPPORTUNITIES + CO-BENEFITS: ECONOMIC + SOCIAL + ENVIRONMENTAL
NBS + URBAN SPACE: RECREATION + HABITABLE SPACES + MAINTENANCE /OPERATION
New housing community development/ Senegal
2. USE OF NATURAL MATERIALS
PLANTATION DE BAMBOUS:
STRATÉGIES IMPLIQUANT LA
RESTAURATION ÉCOLOGIQUE,
L’ATTÉNUATION DES RISQUES
ET LE DÉVELOPPEMENT
ÉCONOMIQUE

PLACE DU BAMBOU

FOURNITURE D’ÉQUIPEMENTS PUBLICS MULTIFONCTIONNELS
POUR LE DÉVELOPPEMENT COMMUNAUTAIRE ET ÉCONOMIQUE

AMéliorer la connectivité et l’accès aux espaces ouverts

L’intégration de l’espace
inéitable dans la conception
des espaces ouverts/publics

L’intégration d’espaces
productifs dans le
paysage urbain

Fournir des corridors
piétonniers adéquats

Incorporation de
surfaces perméables pour
augmenter l’imprégnation

PRODUCTIVE LANDSCAPES: EROSION CONTROL + URBAN AGRICULTURE + CENTER FOR BAMBOO
LOCAL MATERIALS: BEYOND ENVIRONMENTAL BENEFITS

- **ENVIRONMENTAL BENEFITS:**
  Carbon sequestration, lowering energy and emissions linked to transportation, etc.

- **FINANCIAL ACCESSIBILITY**

- **BUILD ON EXISTING SKILLSETS**
  Vernacular construction knowledge

- **REINFORCEMENT OF CULTURAL IDENTITY**

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*Bamboo community workshop/ Haiti*

*Earth construction design-build workshop/ Colombia*
ENHANCING THE VALUE CHAIN: LOCAL ECONOMIC DEVELOPMENT

Bamboo community center/ Colombia

Social Housing Reconstruction/ Haiti (Bamboo)
3. NBS + SOCIAL & INSTITUTIONAL FRAMEWORK

- **DECENTRALIZED INFRASTRUCTURE PLANNING**
- **TOOL FOR COMMUNITY-LED CITY MAKING**
- **PLATFORM FOR COMMUNITY COHESION**
- **PLATFORM FOR PARTICIPATORY PLANNING**

**OPPORTUNITIES AND CHALLENGES**

**NEEDS AND DESIRES**

**EXISTING KNOWLEDGE**

**ID OTHER ACTORS/STRATEGIC ALLIANCES**

**URBAN LOGIC, USE OF SPACE AND DYNAMICS**

**BUILD ON EXISTING SKILLSETS**
COMMUNITY-LED + INFORMAL SOLUTIONS

MEASURES TO IMPROVE RENETION AND FILTRATION

Individual draining holes
- Hole dug on the ground
- 1m x 2m x 1m (D)
- On people’s plots
- Compulsory (FC150 000 fee)
- Can be stabilised with sandbags and placing

Retaining basins
- Hole dug on the ground
- 6m x 9m x 2m (D)
- On public space
- Often stabilised with placing

MEASURES TO DIRECT AND SLOW DOWN RUNOFF

Gutters
- Closed gutters with sandbags
- On flat streets and paths

Diveters
- Stops built with sandbags
- On steep paths

MEASURES TO STOP AND RE-FILL EROSIONS

Dikes
- Dikes built with sandbags to catch sediment capture with water runoff
- 5m height
- Bamboo and other types of plants are used to stabilise the ground
MECHANISMS / CHANNELS TO ALLOW PUBLIC <-> PRIVATE:

- PROCESSES + TOOLKITS
- NAVIGATE BUREAUCRACIES
- CREATE/ENHANCE FOR PLATFORMS + COMMUNICATION CHANNELS OF PARTICIPATORY PLANNING
- PLATFORMS FOR TESTING AND PROTOTYPING: TACTICAL URBANISM

METHODOLOGY: Social dynamics (Santa Cruz de la Sierra)
4. WHERE ARE WE NOW/GOING?

MOTIVATING INSTITUTIONS AND COMMUNITIES TO PURSUE NBS

MEASURE IMPACT BEYOND LOSS AND DAMAGE >> CO-BENEFITS

WELL BEING + LIVABILITY
- Improved urban spaces
- Increase of shaded areas
- Temperature control/reduction
- Air quality

PUBLIC HEALTH
- Increase Pedestrian activity
- Air Quality
- Food Security
- Stress Reduction

ECO-SYSTEMIC SERVICES
- Regulation
- Production
- Biodiversity
- ...

LOCAL ECONOMIC
- Foot traffic
- Safety
- Comfort
- ...

WELL BEING + LIVABILITY

PUBLIC HEALTH

ECO-SYSTEMIC SERVICES

LOCAL ECONOMIC

Biodiversity

FOOT TRAFFIC

SAFETY

COMFORT

IMPROVED URBAN SPACES

INCREASE OF SHADY AREAS

TEMPERATURE CONTROL/REDUCTION

AIR QUALITY

INCREASE PEDESTRIAN ACTIVITY

AIR QUALITY

FOOD SECURITY

STRESS REDUCTION

REGULATION

PRODUCTION

BIODIVERSITY

...

FOOT TRAFFIC

SAFETY

COMFORT

...

Restoration Ecolégique

Pour des corridors rentrants adéquats

Des espaces sûrs pour les enfants

Intégration de l'infrastructure de l'eau (solutions basées sur la nature)

Incorporation d'infrastructures

Associer les espaces productifs à l'espace

Incorporation de surfaces perméables pour augmenter l'infiltration

Relief of Corridors

Safe Areas

Integration of water infrastructure (solutions based on nature)

Incorporation of infrastructures

Link productive spaces

Incorporation of permeable surfaces to increase infiltration