

**Viet Nam Bamboo  
Resources  
Conservation for  
Sustainable  
Development**

**Conservación de  
Viet Nam Bamboo  
Resources para el  
desarrollo sostenible.**

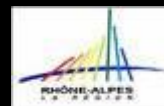
**Dr. My Hanh DIEP**



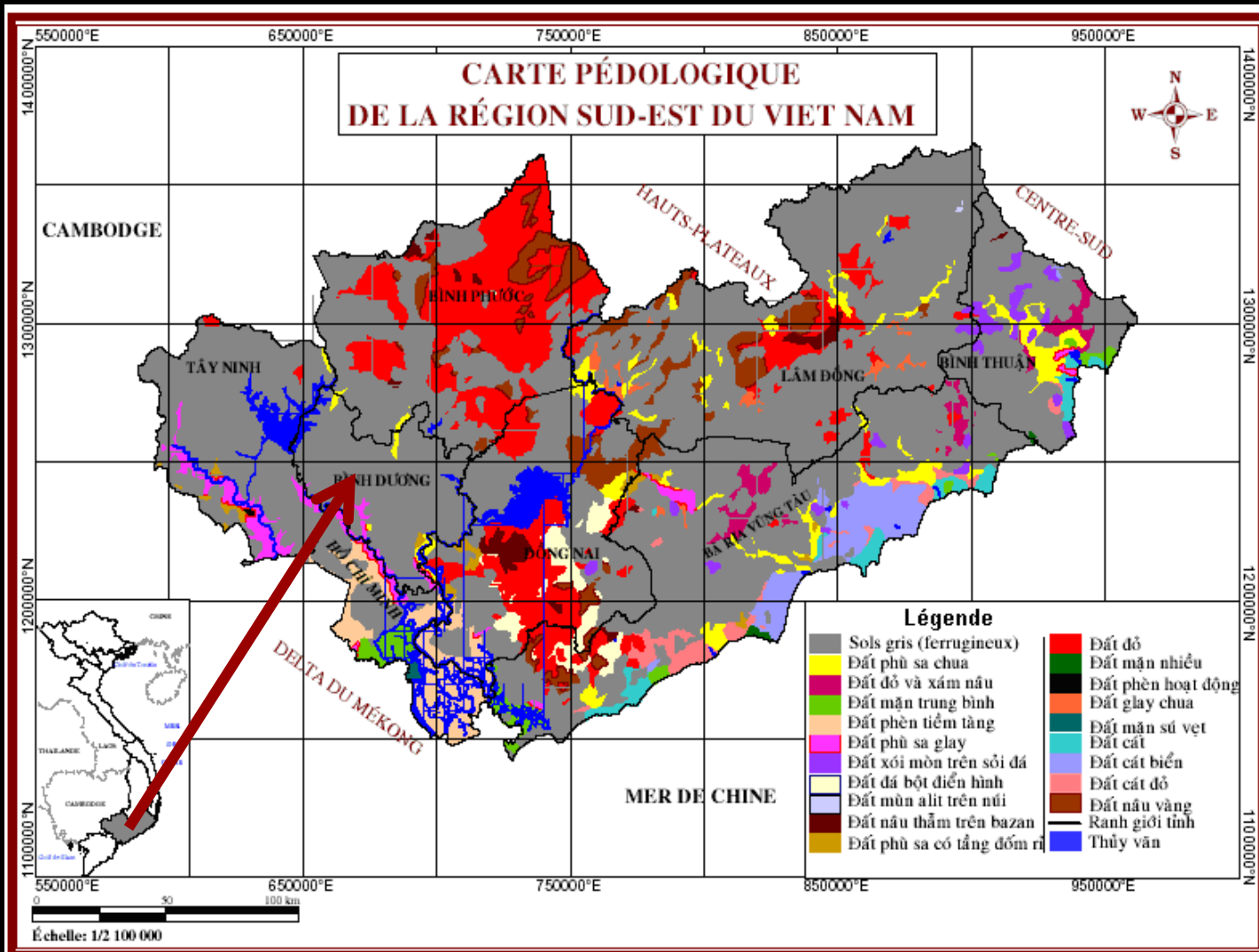
# Viet Nam Bamboo Resources Conservation



## Phu An Bamboo Village Equatorial Prize 2010 of UNDP Jardin Botanique Francophone



# Site of Phu An Bamboo village: in the iron triangle



# **Village de Phu An situé au bord de la rivière où la biodiversité est restée très riche**

**Phu An Bamboo Village is located along a river where biodiversity is varied**



**La biodiversité au bord de la rivière :  
des fleurs de beauté simple mais saisissante**

**The biodiversity along the river :  
flowers simply beautiful but captivating**





Avant et après l'aménagement du terrain pour transformer le triangle de fer en triangle vert

**Before and after planning to convert the Iron Triangle into a Green Triangle**

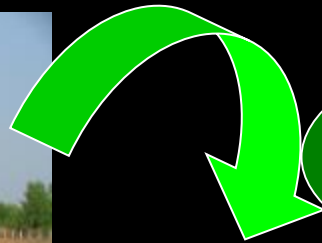
Changement des conditions sociales:  
le conservatoire, un lieu de bien être pour les villageois

**A change in social conditions :  
Botanical Conservation – a new look for the community**

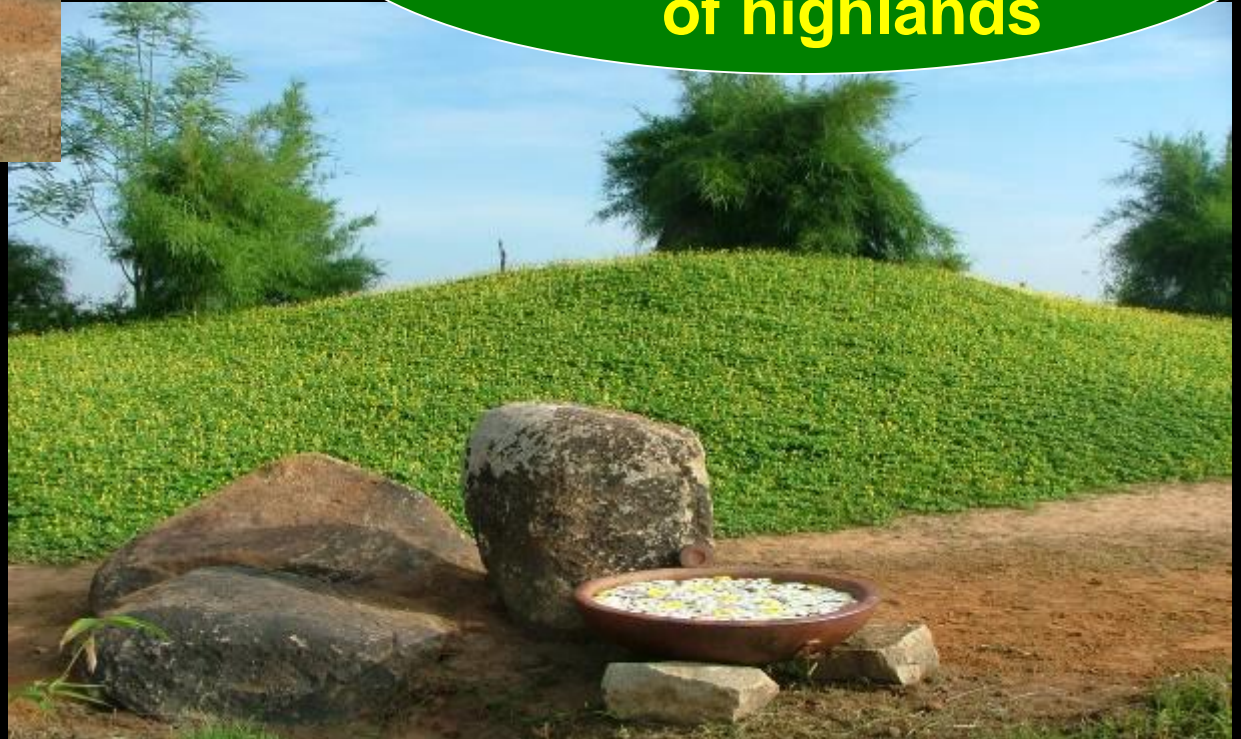


Avant  
l'aménagement

**Before the planting**



Après la plantation  
des bambous des Hauts Plateaux  
**After planting bamboos  
of highlands**



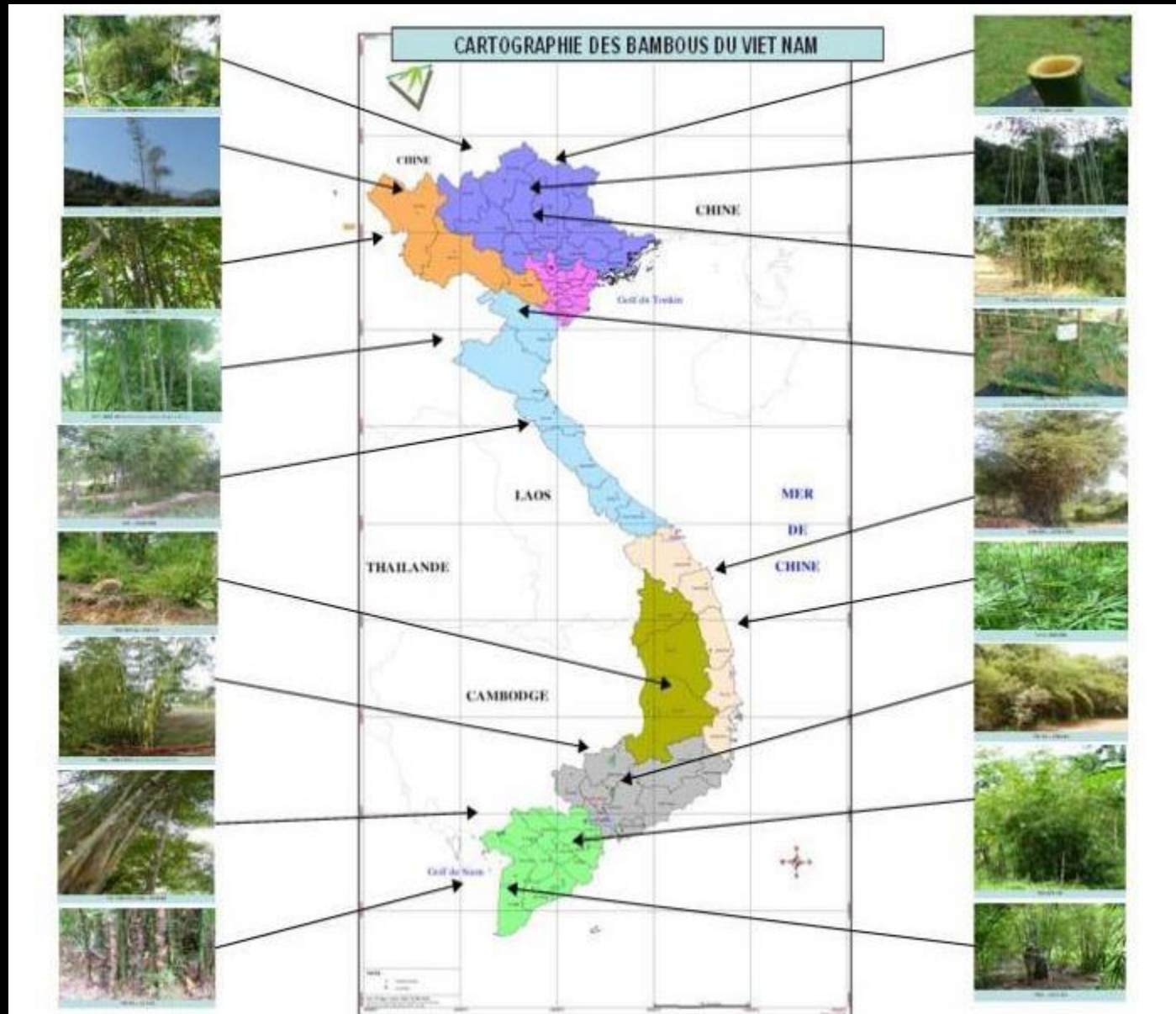
# **Scientific research for bamboo conservation**



# Bamboo collection



# Prospecting for bamboos in Viet Nam (2003-2007:301 specimens collected)



# Taxonomie du bambou

## Bamboo taxonomy

### Phân loại Tre



Collecte et travaux de terrain

Collections and field trips

Sưu tầm thực địa

Littérature  
Literature

Tài liệu tham khảo



Specimens (types et non-types) dans les collections de référence

Specimens (types and non-types) in the reference collections

Thảo tập ( mẫu chuẩn hay không) trong tư liệu sưu tập



- Group of data collectors and managers:**
- Vietnam: Completed field trips
  - Laos and Cambodia: Field trips to be carried out

- B - ---Botany collection & pictures**
- Indochinese Bamboo species' scientific names
  - Physiochemical and DNA analyses
  - Anatomical morphology of bamboo

- Collecting data on the field trips
- References
- Entering collected data

- Adjusting with taxonomists for taxonomy of typical attributes and equivalent characteristics for use in Xper2.
- Verifying the taxonomy results after adjustments.

**Group of botanists and taxonomists**

**Group of IT experts**

- Uploading the online taxonomy key
- Translating the instructions (on species, attributes, characteristics, picture notes) in the database into languages used in the program
- Verifying and assessing the database
- Retrieving in the HTML form

# 12 groups of descriptors



1. Rhizome



2. Chaume (culm)



3. Noeud (nodes)



4. Internodes



5. Culm sheath



6. Sheath blades



7. Sheath ligule



8. Culm auricles



9. Shoot



10. Branches

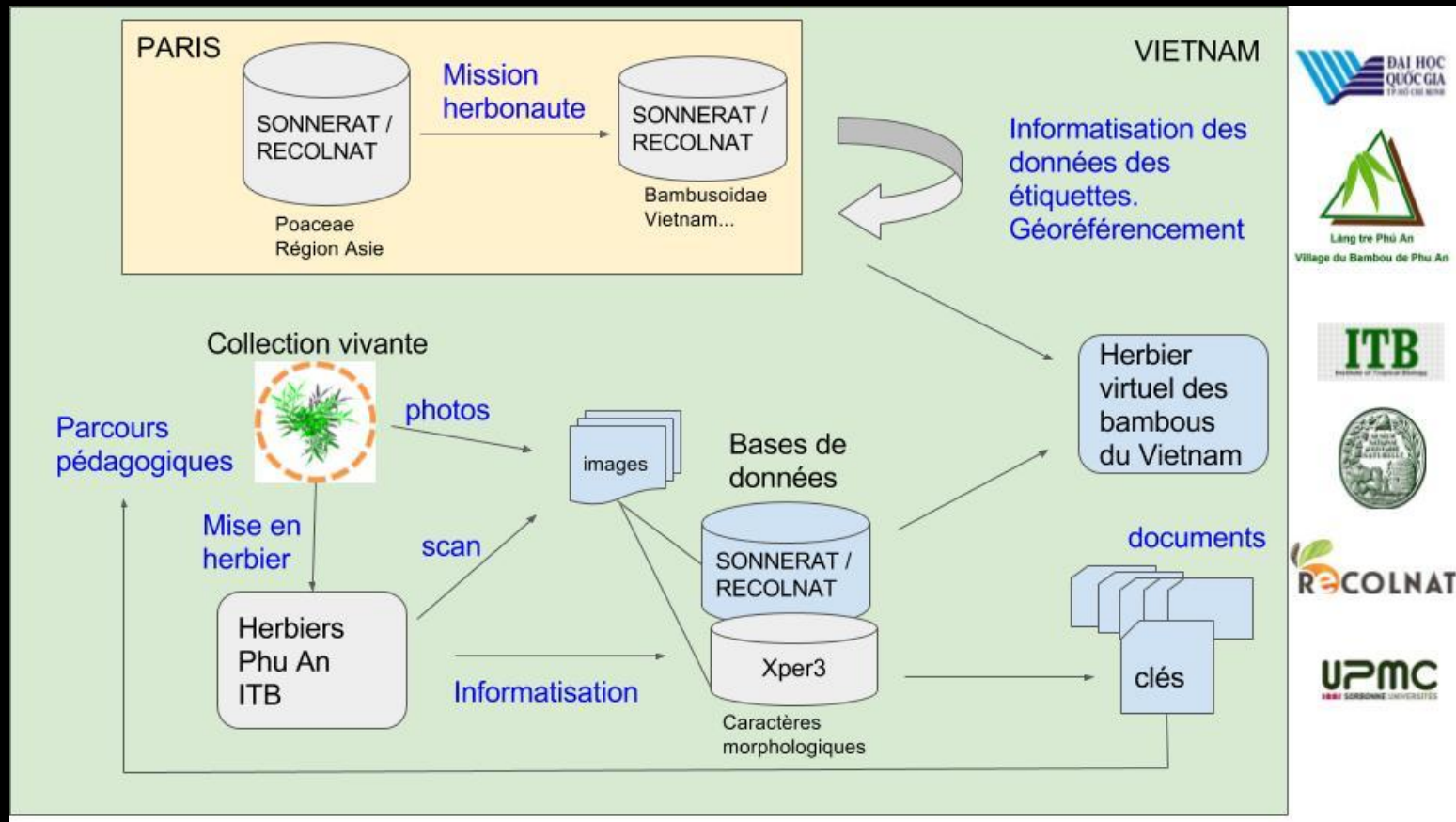


11. Leaves

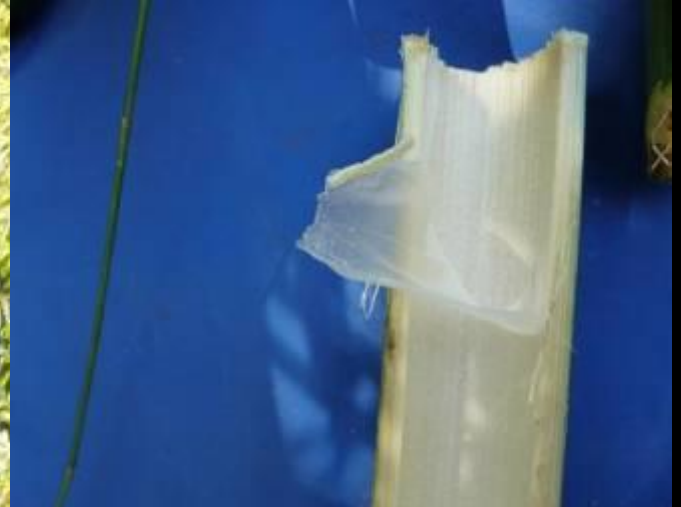


12. Flowers

# Research project with SEP2D



**MAY PO *Cephalostachyum***  
**XE KATAM- Champasak- LAOS**



# *Melocalamus sp.*





# *Vietnamosasa darlacensis*



# Genera

- 1 *Acidosasa* C.D.Chu & C.S.Chao
- 2 *Ampelocalamus* S.L.Chen, Wen & G.Y.Sheng
- 3 *Bambusa* Schreber
- 4 *Bonia* Balansa
- 5 *Cephalostachyum* Munro
- 6 *Chimonobambusa* Makino
- 7 *Dendrocalamus* Nees
- 8 *Fargesia* Franch.
- 9 *Gigantochloa* Kurz ex Munro
- 10 *Indosasa* McClure

# Genera

- 11 *Kinabaluchloa* K.M.Wong
- 12 *Maclurochloa* K.M.Wong
- 13 *Melocalamus* Bentham
- 14 *Phyllostachys* Siebold & Zuccarini
- 15 *Pseudostachyum* Munro
- 16 *Pseudoxytenanthera* Soderstrom & Ellis
- 17 *Sasa* Makino & Shibata
- 18 *Schizostachyum* Nees
- 19 *Sinobambusa* Makino ex Nakai
- 20 *Thyrsostachys* Gamble
- 21 *Vietnamosasa* T.Q.Nguyen

# Study of the role of bamboo in protecting the environment for sustainable development

- Environmentally friendly material from bamboo fiber
- Adaptation of bamboos in different areas
  - Bamboo in dry region
  - Bamboo in flooded areas: protect the bank of the river and fight against the storm
- Solution for people in flooded areas to adapt with climate change:
  - Floating house by bamboo for flooded area.
  - Bamboo piroques for flooded areas

# Bamboos in dry region



# Bamboo in flooded areas



# Activities for sustainable development

- **Education for the children: green class with bamboo**
- **Formation the students of University**
- **Communication for people**

# Formation and education Most important for futur





# Traditional dance with bamboo



# Utilisation des sols pour le dessin en sensibilisant les enfants à la protection de l'environnement

Using the soil for drawing to create a sense of protecting the environment for the children



**Les enfants du village apprennent à reconnaître  
une vingtaine d'espèces précieuses à protéger**

**Children of the village learn to recognize twenty rare and  
precious species to be protected**



**Education for children :**  
**« Savez- vous planter les bambous?**  
**Do you know how to plant bamboos?”**



# Participation à la formation

## Participation in training



Formation des masters sur les  
ressources naturelles à l'Université  
des Sciences de HCMV

Training masters of natural resources  
at University of Sciences  
Ho Chi Minh City

Stage de formation par l'Université  
Paris VI pour l'utilisation d'un logiciel  
d'identification des bambous

Workshop by l'University Paris VI for  
utilisation of software to  
identify bamboos



**Les étudiants découvrent la biodiversité des bambous  
du Vietnam à Phu An**

**Students discover biodiversity of Vietnamese bamboo at Phu An**



# Korean students in Phu An bamboo village



# UTAS students in Phu An





# UTAS students in Ro Koi



# Maison flottante en bambou

## Floating house by bamboo



# Inauguration de la maison flottante en bambou

## Inauguration of the floating house by bamboo



# Bamboo basket for fishing on the sea



# Bamboo piroque for the river



**News products from bamboo shoot:  
please coming taste in our booth**



# Communication in Bamboo Day in Phu An



# Communication: Bamboo Day in Phu An bamboo village



After the Conference, I would like to offer this musical instrument for one Mexican organisme for using to teach the children.





## ROUTE OF BAMBOO

# For sustainable development

The “Route of Bamboo”,  
 real and virtual,  
 connecting the small bamboos  
 to the giant species,  
 connecting the dry ecological,  
 the sloping and seasonal flooded regions,  
 will bring together goodwill for growing bamboo  
 and constitute the heart of humanity.

The “Route of Bamboo” sends  
 the messages to the farmers,  
 selling their back to the sky  
 and their face to the land to feed people  
 and to adapt with climate change,  
 connecting communities living around  
 the bamboo with scientists  
 for the sustainable development  
 and the maintenance of healthy  
 living environment for the people.

Thank you for coming to sign for **the route of bamboo** at our booth



**Le bambou, champion du développement durable**  
**The bamboo, a champion of sustainable development**  
**El bambú, un campeón del desarrollo sostenible**



**MERCI POUR VOTRE ATTENTION**  
**THANK YOU FOR YOUR ATTENTION**  
**GRACIAS POR SU ATENCIÓN**

