AFTERMATH OF TYPHOONS NUMBER 6 AND 7
(OCTOBER 2005)
ON THE COASTAL ZONE FACING HA LONG BAY
HAI HAU DISTRICT, NAM DINH PROVINCE
VIETNAM
Storm fury on the sea shore
Storm fury on the town
Storm fury on the beach
Storm fury on the town
Before the typhoons
Photos taken in January 2005
This new dike, heavily protected by the extremely expensive rock armour
But this new dike, although its outside batter protected by the extremely expensive rock armour; its inside batter was not protected, cover only by local vegetation, mostly weeds.
On a section of about 2km long, vetiver was planted to protect the inside batter, but not in a correct layout design.
After the typhoons
Photos taken in December 2005
The same dike shown before was badly damaged by enormous sea waves
The rock armour was ripped up
Sea facing batter
The opposite inside batter without vetiver planting, badly damaged by the typhoons
Temporary repair with the universal sandbags on the breached section
The opposite inside batter with vetiver planting, undamaged by the typhoons
The opposite inside batter with vetiver planting, undamaged by the typhoons
The inside batter of another sea dike with vetiver planting, undamaged by the typhoons
The inside batter of another sea dike with vetiver planting, undamaged by the typhoons
Erosion on a new and incorrectly planted inside batter
Less than 1 year old and almost 2m root.
New planting by the Dike Department after damages by the typhoons. With correct design this time, they have learnt the lesson!!

Old rock baskets
Socio-economic costs
This is once a house and home of a poor farmer in the section where the dike collapsed.
What can I do now? How can I pay for this???
This was once a solid sea dike
This was once a town
Temporary repairs have to be done
A big community effort
This was once a nice sea side promenade
What happened to it now??