

# The Way towards World Environmental City, Danang

## Counterpart Meeting

3<sup>rd</sup> July, 2009

DOT, Danang City

Facilitated by JICA Study Team

# What has been done so far?

1. Review of planning documents and project documents, interviews
2. Establishment of environmental matrix (all sectors)
3. Highlights of environmental priorities in the long term perspective
4. Focus on IWRM and ICZM and disaster management in relation with water and costal areas.
5. Prospective attempt based on international trends and integrated proposal in line with planning perspective of DaCRISS (today)

# The Vision of Danang for 2025: General

- ❖ Large metropolis with conurbation in Northern Quang Nam and another pole in Hue
- ❖ High population /urban density (less controlled in QNAM), lower density in rural districts
- ❖ Economic polarization: Greater Hue, Greater Danang/Hoi An, Tam Ky /Chu Lai EZ, Dung Quat EZ/Van Tuong
- ❖ Strong international economic competition in the region.
- ❖ Large infrastructure with north south transport, core urban and coastal axis
- ❖ Stronger integration of environment within the economy (regulation of aquaculture/agriculture sector, industries and pollution control abatement, etc.)
- ❖ Higher fiscal revenues for local governments
- ❖ Increased value of service /knowledge-based economies
- ❖ Danang competes to be one the SE-Asian models for environmentally-friendly urban development
- ❖ Modernized public action system oriented toward stronger regulatory capacities and less technical capacities (outsourcing).
- ❖ Demographic pressure expected for the end of the century from sea level increase on human settlements in Vietnam?

# The Vision of Danang for 2025 : Environment and Behaviors

- ❖ Better satisfaction of basic needs, higher consumption of services
- ❖ Higher living standard (revenue/capita)
- ❖ Elevation of education level
- ❖ More private initiative in the environmental sector (incl. finance)
- ❖ Quality of environment /daily life is a pillar of Danang region's capacity to attract investments and skilled human resources.
- ❖ Stronger aversion for natural/industrial risks
- ❖ Risk of tensions between people on the use of limited natural resources: land, water, sea, green areas.
- ❖ Higher value given to holistic and governance approaches to solve problems
- ❖ Awareness of international/national reputation (good/best practices)
- ❖ Stronger sensitivity to long term issues
- ❖ Role of women in the society which impact on social preferences
- ❖ Back to the culture of Harmony with the Nature ?

## The Vision of Danang for 2025: Priority to 3 main systems

### ❖ River basins

- ❑ Water courses and riparian areas: Huong River (TTH), Cu De River (DAN), Vu Gia-Thu Bon QNAM-DAN, Tam Ky (QNAI), Tra Khuc (QNAI)
- ❑ Lakes and reservoirs (Ta Trach, Huong Dien, Binh Dien (TTH), Hoa Trung, Dong Nghe, future Song Bac and Trung An (DAN), Ha Tre, Phu Ninh, Khe Tan, Viet An, Thach Ban, Vinh Trinh, Phuoc Ha, Cao Ngan (QNAI))
- ❑ Continental wetlands
- ❑ Ground Water

### ❖ Coastal & marine systems

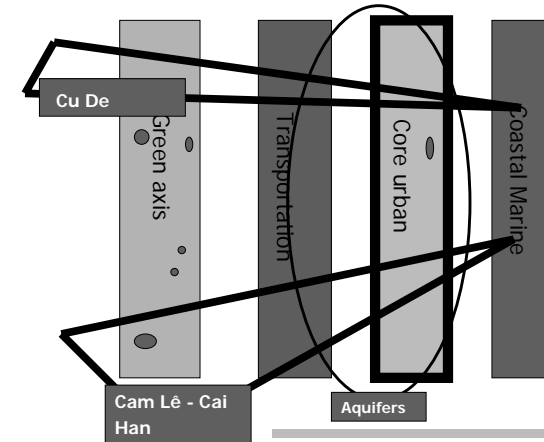
- ❑ Lagoons, estuaries, and coastal wetlands : Tam Giang – Cau Hai, Lang Co (TTH), Cu De and Han DAN, Hoi An and Nui Than wetland (QNAI), Thu Bon delta (QNAI)
- ❑ Beaches: Thuanh An, Lang Co, Canh Duong (TTH), Danang and China Beach (DAN), Ha My, Cua Dai, Binh Minh, Tam Thanh, Bai Rang (QNAI)
- ❑ Islands and Islets : Cu Lao Cham (QNAI), Ly Son (QNAI)
- ❑ Sensitive continental coastal marine areas : Song Tra, China Beach (DAN), Truong Giang river (QNAI)
- ❑ Open sea and remote islands (create seasonal or permanent sanctuaries?)

### ❖ Green areas - land biodiversity sanctuaries

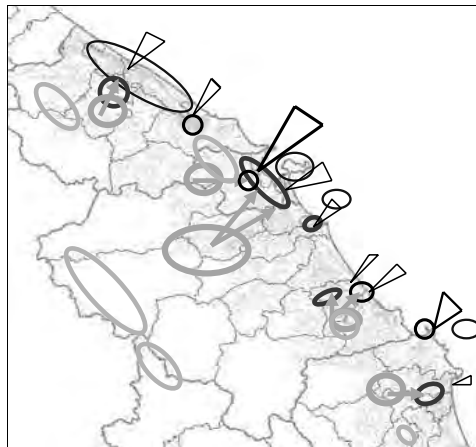
- ❑ National Parks : Bach Ma (TTH)
- ❑ Natural reserves : Cao Muon QNAI, Ba Na Nui Chua, Sond Tra (DAN), Cu Lao Cham, Phu Ninh Lake (QNAI)
- ❑ Other forests and mountainous areas
- ❑ Natural sites linked with cultural heritage (shrines, minority villages, historical sites,...)

## The Vision of Danang for 2025: Scheme

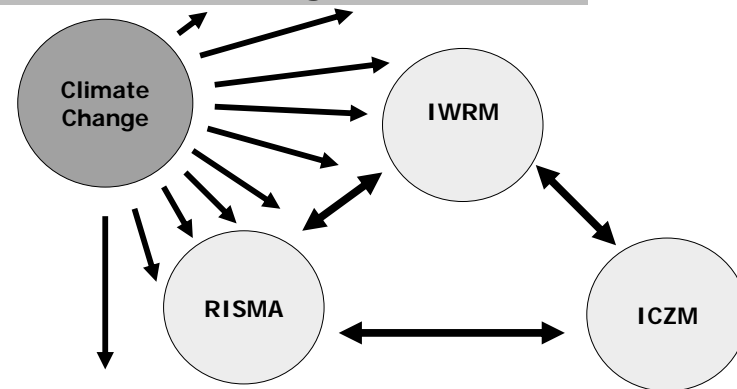
### ❖ The Four axis and the water bodies in 2025



## Corridors and Axis at the regional level



## The Vision of Danang for 2025: the virtuous triangle



# IWRM : Agenda for action by 2025

## Interprovincial initiatives

- ❖ Strengthening of Vu Gia Thu Bon RBO and Huong River RBO capacities and co-operation between DONRE and DARD and MONRE and MARD
- ❖ Meso and micro-planning: Water bodies management at specific sub-levels (Water functional zoning?)
- ❖ Planning tools related to all sectors (in particular energy, infrastructure, tourism, etc.) must comply with the WRMP
- ❖ Polluters Pay Principles and monitoring system (police of water)
- ❖ Development of contractual systems with water users: lake and river contracts, convention with industrialists,...
- ❖ Establish an information system (on water quality accessible to decision makers and to all water users)
- ❖ Strengthening capacities of water sector companies (NRW reduction, water allocation, waste water O&M...)
- ❖ Public awareness campaigns (price of water and waste water, water saving, water recycling, etc.)
- ❖ Infrastructure construction (WWTP, pipe networks, reservoirs, flood areas, etc.), including soft technologies-based options (lagooning,...)
- ❖ Consider inter-provincial raw water transfer (cf. risk management) ?
- ❖ Planning and management tools: database and maps, simulation and forecasting modeling, economics (external costs, opportunity costs, etc.), performance indicators ...

# ICZM: Agenda for action by 2025

## Interprovincial initiatives

- ❖ ICZM management plan and strengthening of authorities with adequate resources allocated to DONRE and strong link with MONRE and PEMSEA
- ❖ Take into account the increase in sea level on the land occupation (cf. DaCRISS maps) and consider techniques for protecting the land.
- ❖ Strengthen regulation and ensure convergence of the various provincial regulatory frameworks
- ❖ Planning tools related to all sectors (in particular energy, infrastructure, tourism, etc.) must comply with the ICZM
- ❖ Continue development of Integrated Information Management System, with application to neighbouring province
- ❖ Create Trust funds for 3 regional MPA (Tam Giang, Song Tra, Cham Islands), possibly common
- ❖ Arranger contractual system with promoters (waste water, solid wastes) , possibly with conditionality for loans they request from banks
- ❖ Marine and Coastal Observatory (incl. climate change observation) with information to people to increase awareness
- ❖ Coordinated approach for coastal protection (erosion) to avoid transfer of problems from a province to another one
- ❖ Develop R&D and training Centre in Danang and Hue
- ❖ Continue fighting against illegal collection and selling of local marine resources
- ❖ Tools: database and maps, modelling, economic calculation, performance indicators ...

# RISMA: Agenda for action by 2025

## Interprovincial initiatives

- ❖ Covers essentially storms/typhoons, floods and inundations, landslides, low impacts of the increase in sea level (saline intrusion, erosion,...), land subsidence – check earthquake/tsunami.
- ❖ May cover also epidemics in context of rapid contamination (including zoo-pathologies in agricultural sector), oil spills (maritime traffic) and also forests fires.
- ❖ May cover water shortage (droughts, natural disaster) and water transfers
- ❖ Avoid fragmentation of responsibilities. Institutional arrangement to evolve according to the development of Danang – more complex environment.
- ❖ Vulnerability maps and construction permits. To be organized together with increase in price of land
- ❖ Operational works: river rehabilitation, coast protection, buffer zones,
- ❖ Insurance systems, incl. risk management plan at the level of large institutions
- ❖ Operational measures: Land use policy and protection of coastal areas: plantation of trees and beaches, dykes, buffer zones, wetlands protections, etc.
- ❖ Observation: Satellite images, laser system (LIDAR) for immediate hazard and long term impacts
- ❖ Risks analysis (incl. leapfrogging effects) - and information to people in Risk prevention plans to prevent damages.
- ❖ Monitoring/alert systems with due decision and reaction process chain (immediate hazard), including emergency communication/transport plans
- ❖ Emergency measures in a perspective of population increase: safety plans with temporary resettlement in neighboring provinces
- ❖ Inter-provincial approach and connection with national approach: data exchange, regulation, infrastructure financing, ODA,...

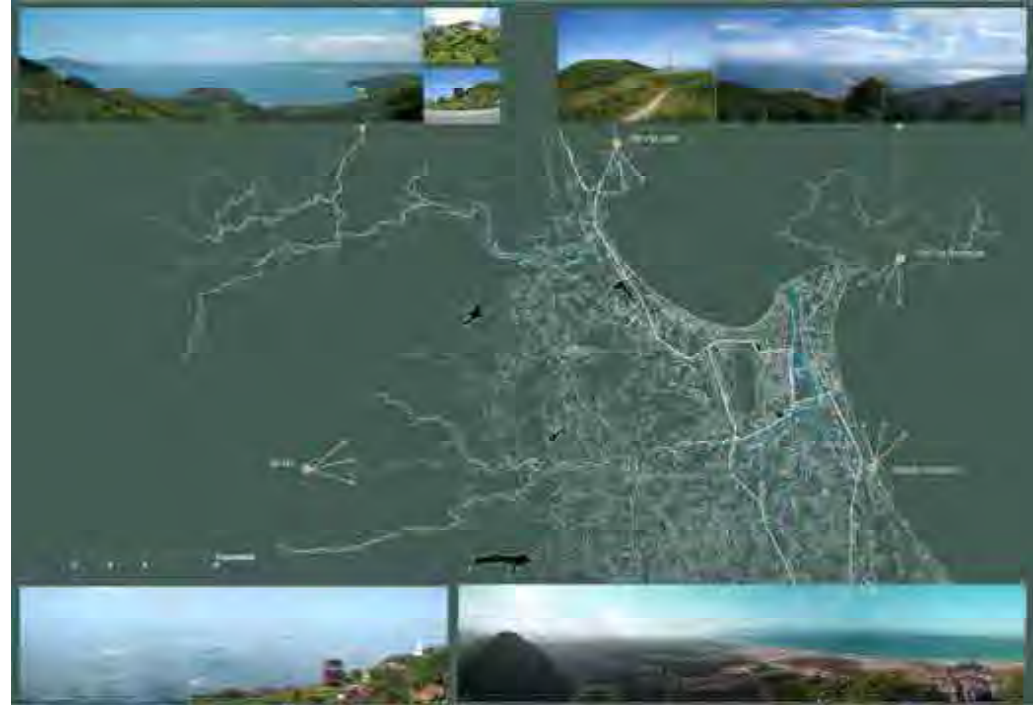
# Financial and Economic Prospective

Sources of Funds / Economies	Estimation of the dominant trends	Next 15 years	Probability of the trend
ODA	Should decrease in DAN and TTH and increase in QNAM and QNAI	↘ ↗	○○○
PPP	More in large cities and EZ - WS first then WW and SW later one. May develop more rapidly if local funds mobilised	↗	○○
Alternative sources of funds: VDB credit lines, trust funds, bonds issuance, equitization of UC	Should develop for Danang, Hue and EZ – but sources should not be overestimated	↗	○○
Tariff adjustments (water and waste water, fees for SW) incl. polluter pays principle	Larger possibilities in large cities	↗	○○
Tax revenues (local public budgets) allocated to environment	Should increase in large cities and EZ	↗	○○
Performance of planning and project construction	Should increase in large cities	↗	○○○
Performance of O&M / skills and productivity of services	Should increase in large cities (cost analysis, NRW reduction, automation, ...) but after investments	↘ ↗	○○○○
Governance (involvement of districts, people awareness) and institutional arrangements	Should develop with new options, including inter-provincial investments enabling economies of scale	↗	○○
Sources of costs	Estimation of the dominant trends	Next 15 years	Probability of the trend
Environmental standards	Should be strengthened (cf. MOC) then cost to be stabilised	↗ →	○○
New investments in the environmental sector, incl. cost of land, technologies and resettlement	Increasing needs: WWTP, SW facilities, infrastructure for CC impacts, RISMA. May increase more rapidly in DAN, Hue and TK,CHLA than in rural areas.	↗	○○○○
Knowledge, data acquisition and expertise	Should increase in absolute and relative terms	↗	○○○
Operating & Maintenance	Should increase along with cost of labour, energy and other resources (incl. water) but partially counterbalanced by productivity gains	↗	○○○○
Result	Estimation of the dominant trends	Next 15 years	Probability of the trend
Total cost (internal and external costs)	Should decrease in the period	↘	○○○

## Landscape Perception Study – Toward Future DaNang's Landscape

### Important view

### Panorama



### Important view

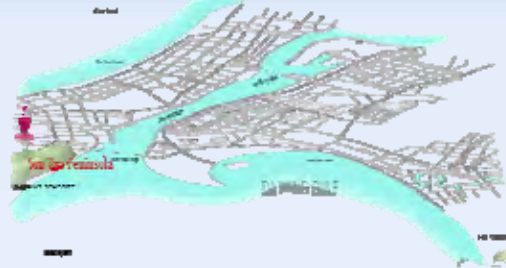
### District Son Tra Peak

#### Voice

The Peak has the splendid command of the whole city, Marble Mountains, Ba Na – Mount Chua. It is an enjoyable and peaceful vista.

#### General Information:

- The altitude:693m.
- A stunning mixture of mountains, sea and sandy beaches; Colorful coral and turquoise water.
- A natural preservation zone (4400 ha)
- TwOnce home to a healthy colony of monkeys → Monkey Island.
- A 20km-long road under construction (around the island) and 26 villas completed construction.
- (Source: <http://www.danang.gov.vn>)



### Important view

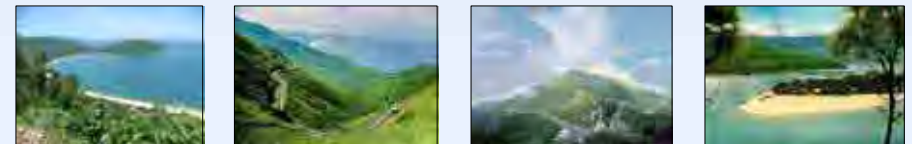
### Edge Hai Van

#### Voice

On the summit of Hai Van pass, a beautiful panorama of the Danang city, Tien Sa port, Son Tra peninsular, Cu Lao Cham and a long white sandy beach can be seen.

#### General Information:

- Hai Van Pass in vietnamese: Đèo Hải Vân, is a mountain pass on National Road No1 in Vietnam. It traverses a spur of the larger Annamite that parallels the South China Sea. The pass is located on the border of Da Nang and Thua Thien Hue province, near Bach Ma National Park.
- Historically, the pass has long been an obstacle on the north-south road of Vietnam and was a physical division between the Kingdom of Champa and Dai Viet.
- The twisting road on the pass has long been a challenge for many Vietnamese drivers but nowadays, since the completion of Hai Van Tunnel, the traffic flow has been facilitated.



**Important buildings and monuments**

**Landmark**  
Song Han Bridge

Voice: Song Han bridge linking Hai Chau and Son Tra Districts are shown. The swing-bridge linking the two banks of the Han River was the result of the solidarity of the Danang authorities and people. It symbolizes the creative and hard-working people developing the city

General Information:

- The Song Han Bridge in Danang is a suspension bridge that is dazzlingly lit up at night
  - The area around the bridge is beautifully paved into a riverside promenade and is the location of Danang's cultural center.
  - The Song Han Bridge helps beach driven tourists to get from their hotels to the area's famous beaches.
- In the middle of the night, traffic is stopped from crossing the Song Han Bridge and it swings on its axis to allow shipping traffic to pass along the river.  
Some of the pressure will soon be taken off the bridge as the Danang regional government plans to build another bridge to traverse the Han River in Danang.



**Important buildings and monuments**

**Landmark**  
Danang Cathedral

Voice

General Information:

- Built in 1923, by Catholic priest Louis Vallet.
- Architectural style: Gothique.
- Height: 70m.
- A lot of names: the Tourane Church (French domination), the Rooster Church (the rooster on its weather vane) & Da Nang Cathedral (in 1963).
- Grotto\_area decorated like Lourdes Grotto in France.

Source: www.danang.gov.vn



**Solutions**

**social dynamics**

DaNang will have the highest quality environment containing world class architecture and distinctive townscape. Good working and living conditions appropriate to a quality metropolitan centre and a high standard of safety and security will be maintained. A greater mixture of uses at street level and a wide range of shops, cultural and leisure facilities will increasingly contribute to a vibrant atmosphere, and the open spaces will continue to provide for leisure and relaxation. DaNang's economic success will create a range of employment opportunities and contribute to the regeneration of the city's fringe areas. Residents and workers should have access to a range of services including health, education and training, and there will be further opportunities for housing but only in areas that do not conflict with central area business. Buildings, streets and open spaces should create an environment that is safe and accessible for everyone.



**Solutions**

**City Center in Trung Luong in Hoa Xuan Commune**



DaNang will be an attractive and inviting city that promotes harmony between the natural and built environments, gives prominence to pedestrian facilities and Amenities. Recent concentrations of development in the Downtown is emerging in striking contrast to the natural environment. This contrast exemplifies DaNang's image as a "City in a Park."



In order for the city to flourish, development needs to provide a high quality environment and amenities and ensure the provision of the services and facilities which businesses, workers and residents need/ to promote DaNang as a world city, recognizing its role as a world class business, commercial, educational and heritage center;/to maintain and enhance the competitiveness of business, including encouraging manufacturing, services, tourism, culture and the arts;/to enhance the vitality, viability and character of town and other local centers as shopping and community facilities that are accessible to all;



To protect existing works of art and to seek the provision of additional works of art which enhance the townscape. Art can contribute significantly to the quality of the environment and will therefore encourage the incorporation of art and art works into the urban scene particularly where it has a relevance to its situation and enhances the sense of place.

To continue to support the provision of art, cultural and entertainment facilities. To encourage the provision and retention of premises for the arts, culture and entertainment.

DaNang city will make available its own premises for hire or use by amateur clubs and societies. DaNang encourage the provision and retention many clubs, societies, professional groups and other organizations operating in the city.



To protect existing traditional craft works and to seek the provision of additional craft works. Crafts can contribute significantly to the quality of the environment such as water fronts, view points, etc.



quality of areas divided by Han River.

The area is characterized by a quality of land uses in different segments of the two areas divided by Han River. To promote and ensure high standards in the landscaping of two different water sides. To encourage improved access for all towards, onto, across and beside the Han River in order to realize its strategic potential for transport, recreation and amenity. Rich and diverse landscape, with an increased different scenic values.



Paris District16: Population Density190人/ha(2005)



District11: Population density416人/ha (2005): Highest density in Paris



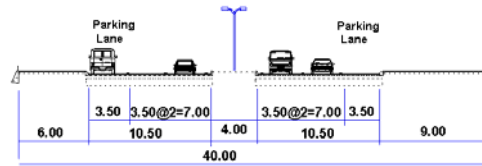
CG whose backgrounds are created by the design quality equivalent to Big C





Nguyễn Tất Thành

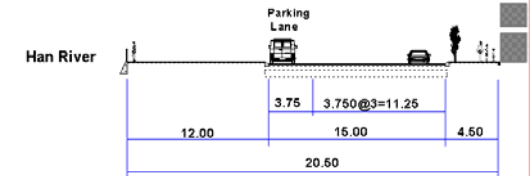
4 Lane + 2 Parking Lane



Pavement was widely taken

Bạch Đằng

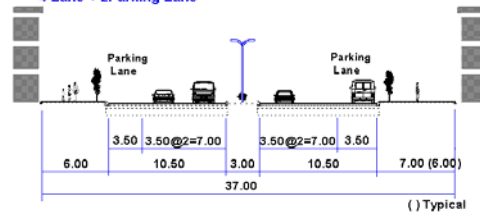
Oneway 3 Lanes + 1 Parking Lane



An image of high street with continuous facades with a sense of integrity

Nguyễn Văn Linh

4 Lane + 2 Parking Lane



Continuous walk way along riverside is interrupted by the state shipyard now. Continuity should be created.



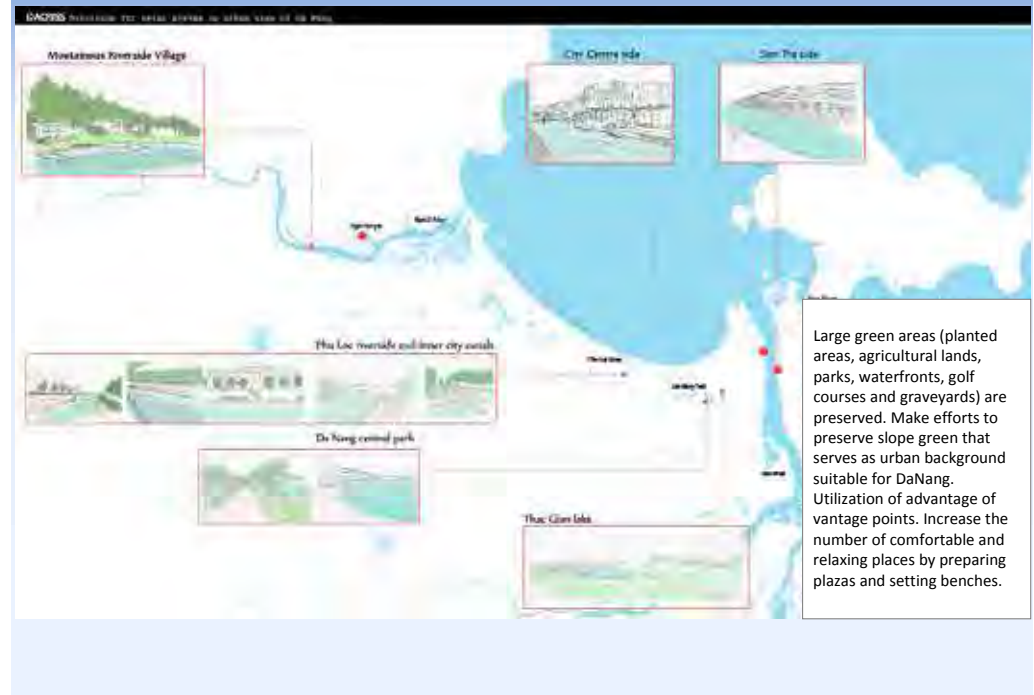


Solutions



The keyword of landscaping of Danang means to realize a town rich with a "quality of life" surrounded by Danang-like natural environments and linked by "water and green." Along the highways, many buildings for different applications such as roadside-type shops, business/distribution facilities and residential houses are located. There also are many signboards and billboards, offering landscapes with diversity.

Solutions



Large green areas (planted areas, agricultural lands, parks, waterfronts, golf courses and graveyards) are preserved. Make efforts to preserve slope green that serves as urban background suitable for DaNang. Utilization of advantage of vantage points. Increase the number of comfortable and relaxing places by preparing plazas and setting benches.

Solutions



Creating the sites of "water and green" Relics, historical sites, parks and public facilities are set up as "sites of water and green" rich in green (nature), and city planning is made to make them feel familiar. They are networked by various green streets, covered with green canopies, giving the city a sense of order and elegance.

Solutions



To protect trees that contribute to the character or appearance of conservation areas. Elsewhere, to seek to retain or replace trees of importance to the townscape of the City and promote enhancement through additional planting where appropriate.

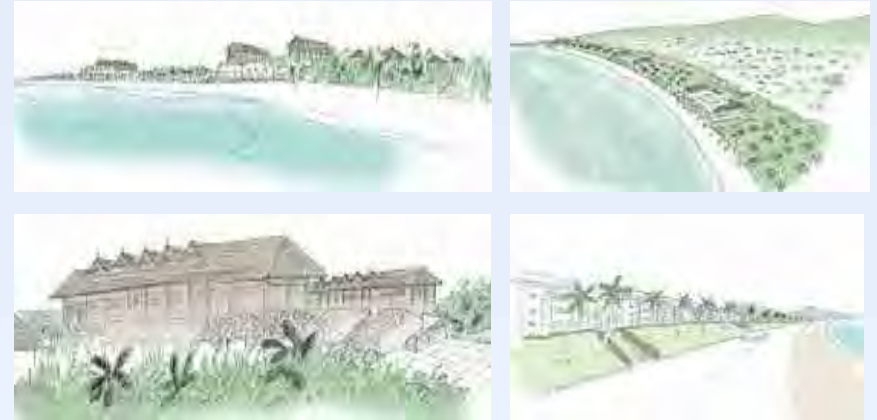
Image of high-street with well-balanced skyline.



The waterfront walkway is envisioned as a continuous pedestrian amenity, carry on along the beach and the river, to the proposed resort development areas.

The character of the waterfront walkway will vary, reflecting the varied context of the seashore areas. The beaches of DaNang should be calm and rest, beauty of landscape, and cleanliness.

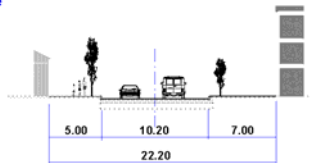
These are characteristics that correspond to undisturbed coastal areas which, as a rule, are away from urban centers.



CG showing the state when the frontage is recovered to the original one. An example of methods to increase the green from public facilities



Ong Ich Khiem  
2 Lane



Sites adjacent to large parks and green spaces are utilized as background by linking the existing green with the green on site, a same of continuity should be created in the city.



The management of riparian vegetation effects the physical environment of streams (in-stream habitat) that native plants and animals need to survive, feed and breed. The physical environment also influences our use of river landscapes for recreation (human habitat), for cultural activities and for its intrinsic scenic value. Children and youth of different ages have diverse and often specialized needs. Some of these needs are for landscapes along with 'water and green' areas.



In this image, the original signs have been replaced with monument signs and power lines. The utilities have also been consolidated.



Parking is an essential element in regards to urban design and traffic circulation. A parking plan should be developed for each site prior to development . The type and number of parking spaces should reflect the desired uses of each site. Landscaping of parking areas is also recommended to provide shade, enhance the beauty of a site, and allow for a reduction in storm-water runoff. Parking structures are generally constructed using asphalt or concrete,



# Municipal Finance Management:

Issues, actions to be incorporated in the Interim Report

TSUKUI Atsushi

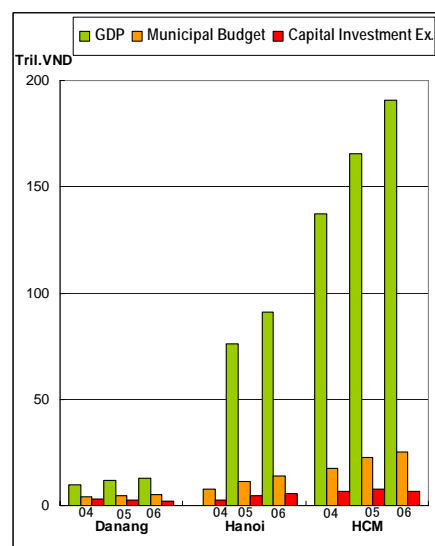
## Issues

- Aiming to secure financial capability to implement listed projects in the Master Plan

1. Recent and future trend of municipal budget
2. Actions for a sustainable finance

### 1. Recent and future trend of municipal budget

Municipal budgets comparing 3 cities in Vietnam



### 1. Recent and future trend of municipal budget

#### Municipal budgets comparing 3 cities in Vietnam

(Bil. Dong)		2005	2006	2007
Da Nang	GDP	11,691	12,865	15,234
	Municipal revenue	5,516	6,490	7,594
	Capital Investment Expenditures (C.I.E)	2,745	1,974	2123
	Revenue/GDP (%)	39.2	40.3	52
	C.I.E / GDP (%)	23.5	15.3	13.9
Hanoi	GDP	76,006	90,929	
	Municipal revenue	30,748	39,553	
	Capital Investment Expenditures (C.I.E)	4,819	5,898	
	Revenue/GDP(%)	15.10%	15.2	
	C.I.E/ GDP (%)	6.3	6.5	
HCM	GDP	165,297	190,561	
	Municipal revenue	61,860	71,205	
	Capital Investment Expenditures (C.I.E)	7,517	6718	
	Revenue/GDP (%)	13.6	13.2	
	C.I.E / GDP (%)	4.5	3.5	

## 1. Recent and future trend of municipal budget

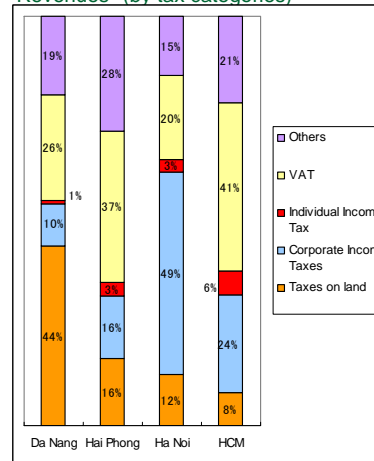
### Japanese cities' example

(Bil. Dong)		2005	2006
Kita-Kyusyu	GDP	676,300	669,200
	Municipal revenue	97,690	94,360
	Capital Investment Expenditures (C.I.E)	36,750	35,430
	Revenue/GDP (%)	14.4	14.1
	C.I.E / GDP (%)	3	2.8
Nagoya	GDP	2,339,000	2,358,000
	Municipal revenue	180,500	185,100
	Capital Investment Expenditures (C.I.E)	19,080	22,970
	Revenue/GDP (%)	7.7	7.8
	C.I.E / GDP (%)	0.8	1
Kobe	GDP	1,107,000	1,132,000
	Municipal revenue	133,800	143,500
	Capital Investment Expenditures (C.I.E)	15,810	16,240
	Revenue/GDP (%)	13	11.8
	C.I.E / GDP (%)	1.4	1.4

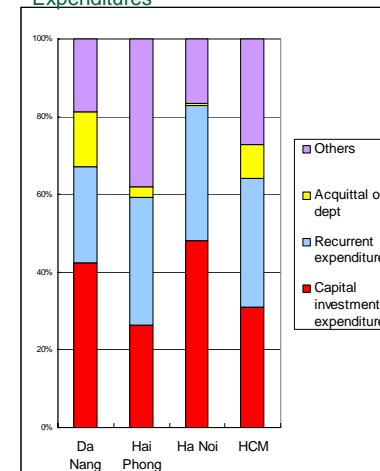
## 1. Recent and future trend of municipal budget

### Comparison of Municipal Financial Structure in 2006

Revenues\* (by tax categories)



Expenditures

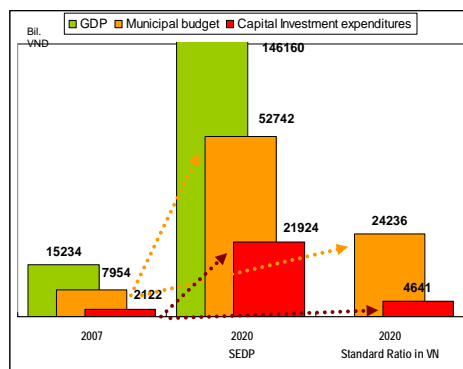


\*Revenues from import/export are excluded because 100% of these revenues is transferred to the Central government, while most part of other taxes is decentralized to the local budget.

## 1. Recent and future trend of municipal budget

Unit: billion VND		2007	2010	2015	2020	2025
Danang Municipal Budget	SEDP	7,954	10,070	22,885	52,742	-
	GDP: Municipal budget = 15% (same as Hanoi)		4,316	9,536	21,924	52,500
Of which: Capital Investment Expenditures	GDP: Municipal budget = 14%	2,123	3,724	9,500	24,236	61,830
	GDP: Municipal budget = 6.5% (same as Hanoi)		2,543	3,435	4,641	6,269

### Danang Municipal Budget Forecast



## 2. Actions for a sustainable municipal finance

- 1) Study of the State Tax System
  - i. Local fees collected annually
  - ii. Accountability for municipal finance
- 2) Introducing Special-purpose Fees
  - i. Fee for owning car/motor bike
  - ii. Charge of parking space
  - iii. Fees for visitors
- 3) Promoting Public Private Partnership
  - i. Potential Impacts on infrastructure
  - ii. Cases
  - iii. Action

## 2. Actions for a sustainable municipal finance

### Study of State Tax system

#### ■ Fee collected annually

To impose tax to ASSETS (land, real states, machines etc.) so that the city have stable revenue resources

#### Experimental action

e.g. Fee for owning motor bike

Consider: People's acceptance, Place of registration

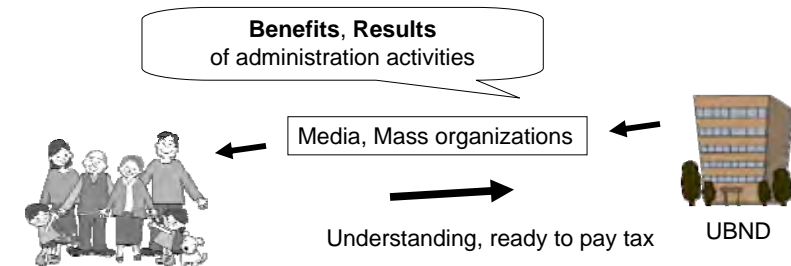
## 2. Actions for a sustainable municipal finance

### Study of State Tax System

#### ■ Accountability for municipal finance

#### Experimental action

Disclosure of municipal Information including finance



## 2. Actions for a sustainable municipal finance

### Special-purpose Fees

#### ■ Fee for gas emission (car/motor bike)

To impose a fee to car/motor bike

	Number in Danang	Fee (000 VND/year)	Sub total (mil. VND/year)
Car	4,000	1,000	4,000
Motor bike	360,000	100	36,000
<b>Total</b>			<b>40,000</b>

= Equivalent to 0.5% of the whole budget

Compare:

Revenue in Danang in 2007			
Individual income tax	60,274	Gasoline/oil fees	110,284
Registration fees	132,874	Fee/charges	106,806

To use this revenue for the Project for Da Nang Environment City Development

## 2. Actions for a sustainable municipal finance

### Special-purpose Fees

#### ■ Charge of parking space

Simulation: Market of parking space business

	Number	Fee/throw (VND)	Days	Whole market (mil. VND/year)
Motor bike	360,000	2,000	365	262,800

10% of the market might be generated in public space, whereas a part of parking space is provided by workplaces/shops for free. 262 billion VND x 10% = **2.6 bil. VND.**

To impose a charge of parking space to restrict jams in pavements  
To use this revenue for developing public transportation.

## 2. Actions for a sustainable municipal finance

### Special-purpose Fees

#### ■ Fees for visitors

	Number 2008	Entrance fee for Environment City/ Resort beach (VND)	Total (mil. VND)
Visitor	1,200,000	10,000	<b>12,000</b>
Of which: foreigners	390,000	20,000	<b>7,800</b>

To use this revenues for the Project for Da Nang Environment City Development

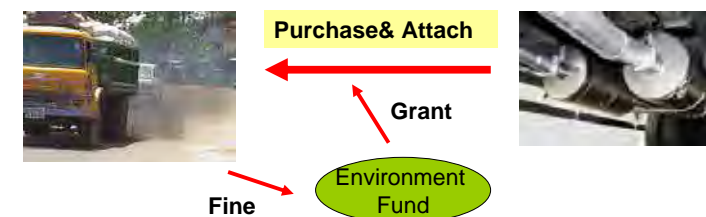
## 2. Actions for a sustainable municipal finance

### Experimental action

#### ■ Diesel car control (black smoke reduction)

Target: Old diesel cars (Buses, trucks)  
 Means: 1. Promote replace old car (ban after a certain grace)  
 or  
 2. oblige to attach a specific filter on car's muffler

Impose a fine if driver(company) does not meet above options



## 2. Actions for a sustainable municipal finance

### PPP Case study

#### ■ Potential Impact on infrastructure

Value For Money: Less late/over budget project due to competition and risk transfer

Value For Money: Better Service due to output oriented design / whole life costing

Catalyst for Public Sector reform due to establishing due process and transparency

## 2. Actions for a sustainable municipal finance

### PPP Case study – BOT: National Route 1

- Contractor: CECO545 (a SOE Subsidiary)
- Output: Road (length: 8km)
- Project cost: 500 billion VND (including repair cost during project)
- Dept: 75% from private bank in Danang, 25% self-funding
- Project term: 16 years
- Tariff: 1.5- twice higher than national standard (11years to recover cost, 3 years for benefits)
- Benefits: 400 billion VND (estimation)
- Risk transfer: Reportedly full guarantees from State
- VFM: No consideration
- Procedure: Very smooth (\* because they are SOE's subsidiary)

Lesson learned: Procedure to set high tariff and obtain full guarantees by State

## 2. Actions for a sustainable municipal finance

### PPP Case study – BOT - Thu Duc water supply

- Contractor: Consortium of French and Malaysian companies
- Output: Bulk water (300,000m<sup>3</sup>/day)
- Project cost: 150 million USD
- Dept: 70% loan from ODA and foreign bank, 30% self-funding
- Project term: Terminated by the HCM city when the project began operation
- Tariff: HCM purchase 0.21USD/m<sup>3</sup>, sell to residents 0.11USD
- Benefits: <Unclear>
- Risk transfer: Only political risk like war / No guarantee of termination compensation
- VFM: <Unclear>
- Procedure: Dispute over contract interpretation and administrative procedure, off-take price

Lesson learned: Contract (off-take price), Guarantee by the Gov., Tariff setting

## 2. Actions for a sustainable municipal finance

### PPP Case study – BOOT- Nam Theun 2 Hydropower In LAO

- Contractor: 4 agencies (GOL, French and Thailand companies)
- Output: 1,070MW (95% is exported to Thailand )
- Project cost: 1.45 billion USD
- Dept: Loan from mainly private sector with political risk guarantee by ADB
- Project term: Launched in 2002, commercial operation from 2009
- Benefits: GOL will earn 2 billion USD
- Risk transfer: diligence review of risks
- VFM: -
- Procedure: -

Lesson learned: Large benefits, Fair risk distribution, Participation of Gov., Experienced lenders, Careful contract formation (with international adviser)