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## List of Acronyms

|        |  |
|--------|--|
| BAP    | Biodiversity Action Plan   |
| CLC    | International Convention on Civil Liability for Oil Pollution Damage, 1992   |
| DOSTE  | Department of Science, Technology and Environment  |
| EIA    | Environmental Impact Assessment  |
| FAF    | Fishery-Agriculture-Forestry   |
| FUND   | International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992                             |
| GEF    | Global Environment Facility  |
| HNS    | International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996 |
| ICM    | Integrated Coastal Management  |
| IEIA   | Integrated Environmental Impact Assessment   |
| IEPZs  | Industrial and Export Processing Zones   |
| IMO    | International Maritime Organization  |
| ISO    | International Standards Organization   |
| IZ     | Industrial Zone  |
| LDS    | Labour, Disabled and Society   |
| MOSTE  | Ministry of Science, Technology and Environment  |
| NPESD  | National Plan on Environment and Sustainable Development   |
| NRDA   | Natural Resource Damage Assessment   |
| PC     | People's Committee   |
| PCC    | Project Coordinating Committee   |
| PEMSEA | Partnerships in Environmental Management for the Seas of East Asia   |
| TCVN   | Vietnamese standards   |
| UN     | United Nations   |
| UNDP   | United Nations Development Programme   |
| UNESCO | United Nations Education, Scientific and Cultural Organization   |
| URENCO | Urban Environment Company  |



## Glossary

**Biodiversity:** Abundance in gene resource, species and ecosystems.

**Civil Society:** Collectively refers to groups of society, who, not motivated by profit, are organized nationally or locally for the advancement of particular purposes that relate, directly or indirectly, to the coastal and marine area. This includes NGOs, conservation and advocacy organizations, civic organizations, people's organizations, mass media, religious groups, and less organized groups such as subsistence resource users, landowners, and indigenous communities.

**Clean production:** Application of continuous integrative environmental prevention strategy for manufacturing processes, products and services to ensure the increase of productivity and decrease of risks to human and environment.

**Ecosystem:** System of biological communities co-existing and developing in certain environment, interacting with each other and with the environment.

**Ecosystem management** Management of ecosystem values and uses recognizing the interactions with the environment and responding to signals from the ecosystem to control anthropogenic activities and uses (Sainsbury et al., 1997).

**Ecotourism:** Tourism focusing on environmental and cultural resources and usually based on a conservation theme (Cicin-Sain & Knecht, 1998).

**Habitat:** A smallest geographic unit of shelter, characterized by a type of biological species of high identity, suitable for the environment in the area.

**Integrated coastal management:** A natural resource and environment management framework, which employs an integrative holistic approach and interactive planning process in addressing the complex management issues in the coastal area.

**Stakeholders:** Persons or entities who directly or indirectly, positively or negatively affect or are affected by the policies relating to or activities or phenomena in the area of concern.

**Sustainable development:** Development that ensures the continuance of natural resource productivity and a high level of environmental quality, thereby providing for economic growth to meet the needs of the present without compromising the needs of future generations (Clark, 1996).

**Wetland:** Areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed six meters (as defined by the Ramsar Convention).

## Acknowledgements

The Coastal Strategy of Danang is a culmination of the efforts, advice and support of the various stakeholders and individuals of Danang, who care for their marine and coastal areas and whose vision is to see Danang striking a balance between development and environmental protection.

We would like to acknowledge the support of Danang people whose enthusiasm in sharing their knowledge, experience and views during the consultation process has stimulated dynamic and productive discussions.

We are indebted to the different local, national and international experts from different agencies and institutions for their willingness to take time out of busy schedules to provide their expert opinions on important issues.

We are also pleased to acknowledge the direction of the City Government and the support of the district governments

and civil societies during the Strategy development process. Their inputs are proven valuable to the completion of this document.

We are especially grateful to the staff of the GEF/UNDP/IMO Regional Programme on Partnerships in Environmental Management for the Seas of East Asia for their technical support in completing this document.

In closing, we hope that this document will serve its intended purpose, that is, to develop Danang to live up to its position as the emerging international gateway and economic growth center of Vietnam.

**Project Coordinating Committee  
National Demonstration Site Project on ICM  
in Danang City, Vietnam**



## Foreword

### The Coastal Strategy of Danang

The Coastal Strategy represents the vision of the people of Danang on how they would want their coastal and marine environment to be in the future and the actions that they need to take now to attain this vision. It expresses the Danang Government's and its people's determination and commitment to promote the sustainable use of their coastal and marine resources and environment. It also expresses their concern over the protection and conservation of material and spiritual values, with which, the City is richly endowed by history and nature.

The Strategy provides short- and long-term action programs designed to resolve complex issues that beset the coastal and marine environment and their resources through cross-sectoral cooperation. It specifically directs stakeholders to rationally exploit and use their coastal and marine resources and environment in accordance with common development objectives.

### The Heart of the Strategy

The Strategy focuses on 5 main areas:

- ◆ Inform
- ◆ Sustain
- ◆ Preserve

- ◆ Protect
- ◆ Develop

The Strategy provides principles, which serve as guidelines for its implementation at the international, national and local context. The principles serve as basis in developing the objectives and action programs particularly in resolving problems/issues caused by multiple use conflicts, which characterize the coastal and marine environment of Danang.

The Strategy is integrative, systematic and practical, which ensures that appropriate policy and management interventions prescribed in the document will be carried out. The integration of capacity of relevant sectors/organizations, the linkage of related programs/projects/activities and the application of international and national experiences in related fields are important factors for achieving the common objective - the sustainable development of the coastal area of Danang.

### Development of the Strategy

The Strategy has been developed following a long process of consultation with stakeholders, including decision makers, resource and environment managers, scientists, representatives of local governments and other entities, who are interested in natural resource and environmental protection and preservation, and sustainable development of Danang. The active participation of the stakeholders served

as basis for the approval of the Strategy by the People's Committee of Danang City, as well as for the effective implementation of its contents.

### The Challenge Ahead

The great challenge for the Strategy implementation is the evaluation of appropriate areas and activities, where the action programs will be most applicable and ensuring how the resources in these areas will be sustained, protected or preserved; the habitats recovered or developed. The success indicator of the Strategy would be reflected in the overall improvement of environmental quality allowing the people of Danang to live in a healthy environment, thus giving them the opportunity to enjoy their environment and at the same time derive more economic benefits from the goods and services provided by the coastal and marine areas and their resources.

Box 1. The consultation process on the development of the Coastal Strategy.



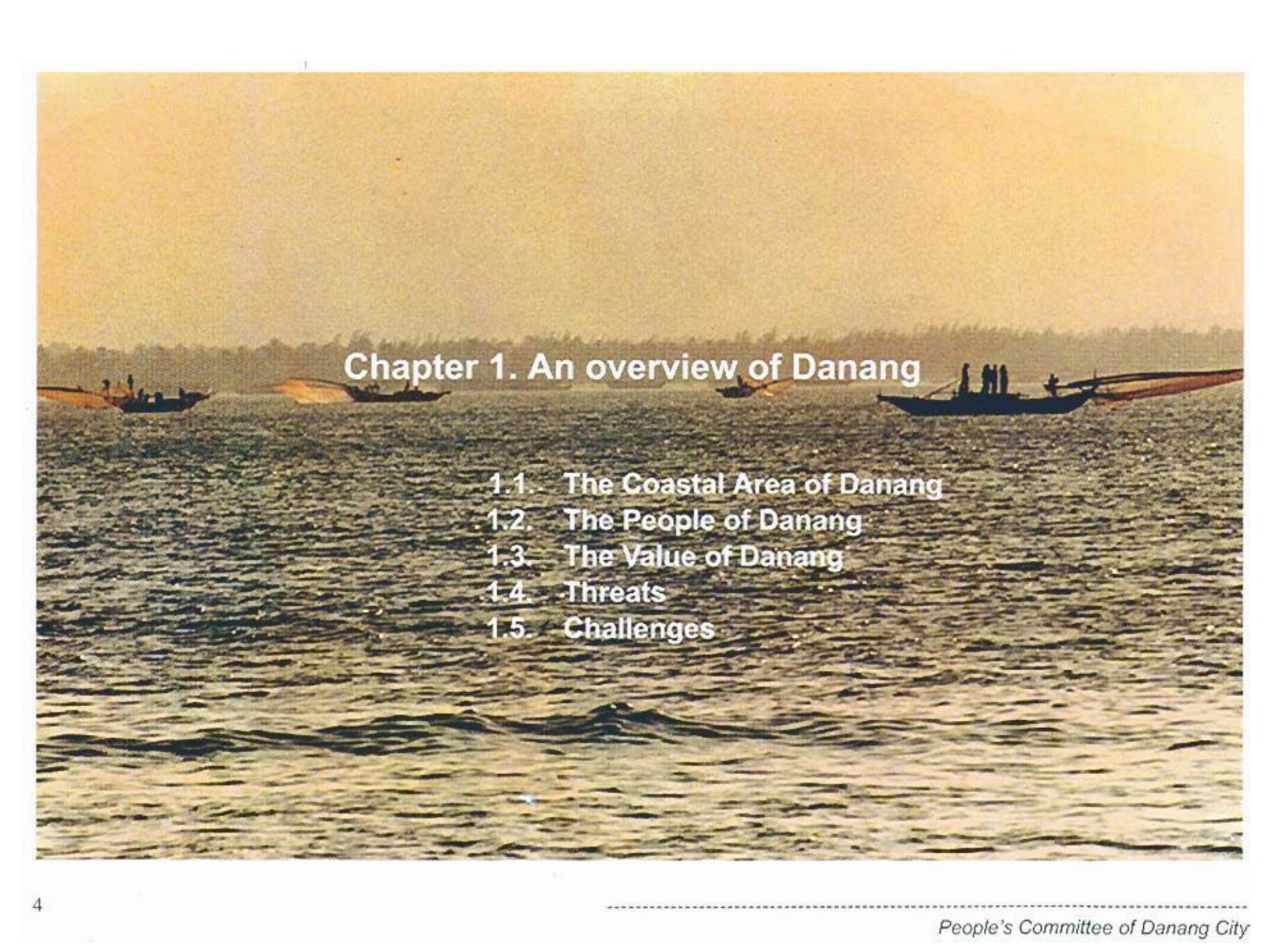




## Vision

*A coastal area of rapid and diversified development, with green, clean, beautiful and healthy environment; where the natural resource system is under long-term planning and sustainable use; where the ecological, cultural and historical values are preserved; where the Danang people are provided with maximum benefits while the ecological values are maintained, and where Danang shall spearhead Vietnam and the Region towards sustainable development.*





## Chapter 1. An overview of Danang

- 1.1. The Coastal Area of Danang
- 1.2. The People of Danang
- 1.3. The Value of Danang
- 1.4. Threats
- 1.5. Challenges



## 1.1. The Coastal Area of Danang

Danang is strategically located in the central coast of Vietnam. It is composed of 7 districts: Hai Chau, Thanh Khe, Lien Chieu, Son Tra, Ngu Hanh Son, Hoa Vang and Hoang Sa (Paracel) Island. The harmonious co-existence of mountains, forests, rivers and the sea provide the City a great value for tourism, trade, services and a multitude of development activities.

The coastal area of Danang is defined, based on three criteria: administrative, land-sea interface and manageability. The management boundary encompasses Lien Chieu, Thanh Khe, Hai Chau, Son Tra, Ngu Hanh Son and Hoa Vang districts and coastal water up to a depth of

approximately 50 m. Danang has a coastline of approximately 92 km<sup>(\*)</sup> which is occupied by 17 coastal communes. The coastal area is characterized by high population density and rapid economic development. The coastal and the marine environment are threatened by a variety of development activities.

There are two major rivers that drain into Danang Bay, the Han and Cu De Rivers. The watershed of the Cu De River is 472 km<sup>2</sup>. The Han river belongs to the Vu Gia - Thu Bon River system that has a watershed of 5,180 km<sup>2</sup>.

(\*): Measured from the Danang administrative map of 1/50,000, published by the General Department of Land Administration, 1994).

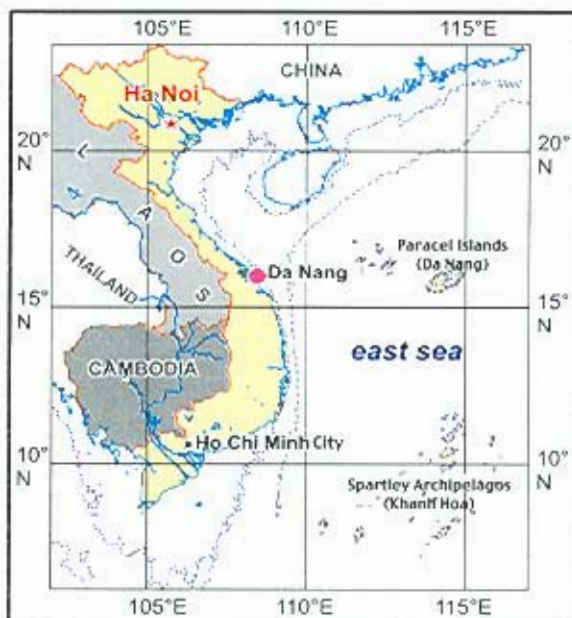


Fig. 1 The Map of Vietnam

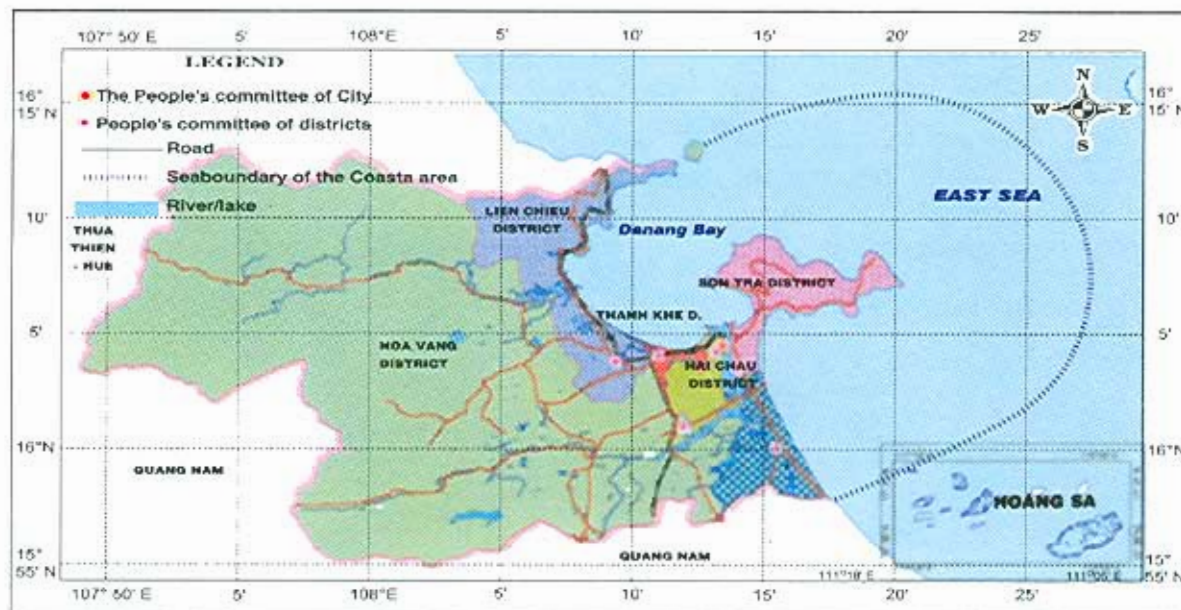


Fig. 2. Management boundary of Danang coastal area.

## 1.2. The People of Danang

### Demography

As of 31 December 2000, the population of Danang is recorded at 722,826 persons. The average population density is 575 persons/km<sup>2</sup>. Higher density was recorded in the urban area, 2,678 persons/km<sup>2</sup>, comprising about 78.9% of the total population. About 50.96% of the population is female. The Kinh people comprises 99.6% of the population and the remaining is of the Kotu group. The labor force makes up 34.95% of the total population. Appendix 3 provides the details on the population, area, as well as the natural resources per district.

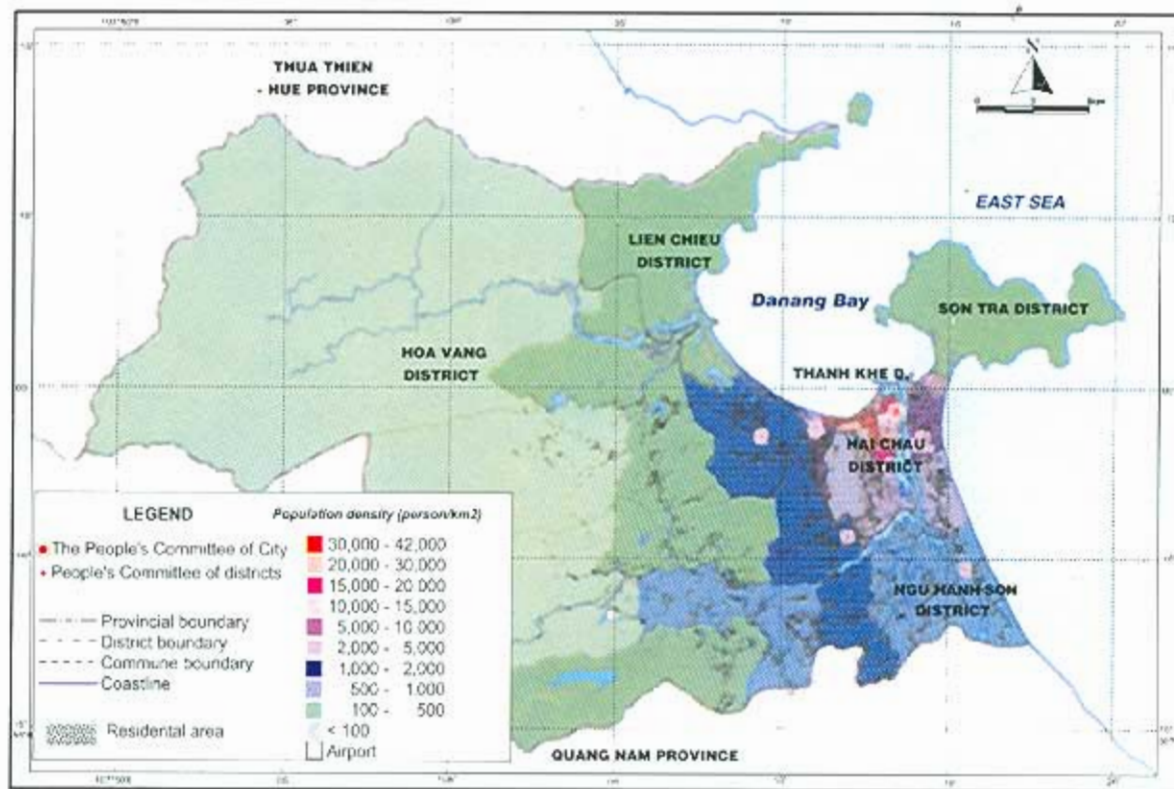


Fig. 3. Population distribution in Danang City.

| No. | Sector                    | Percentage |
|-----|---------------------------|------------|
| 1   | Private sector            | 67.1       |
| 2   | State sector              | 29.2       |
| 3   | Foreign investment sector | 3.7        |

Table 1. Percentage of labor force by sector.

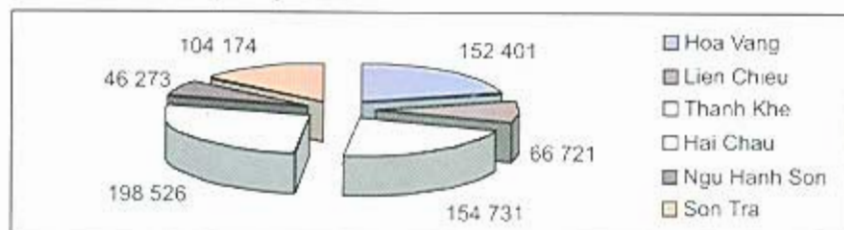


Fig 4. Population of Danang City by district.



## Education

Contributing to the efficient labor force are graduates from the different universities and schools in the City. In January 1997, Danang achieved national standards on compulsory primary education and eradicated illiteracy, and up to now, has basically universalized junior secondary education. The City is among the cities/provinces of Vietnam having high educational development indicator.

## Culture

Danang boasts its rich culture, which it owes to its remarkable history. Traditional festivals such as fish worshipping, boat racing display are hosted annually. It also has traditional theatrical arts such as the traditional Vietnamese opera known as Tuong and folk music called "Inter - Region Number V folk music". There is a good number of outstanding scholars, old and experienced artists in Tuong and folk music; some cultural and artistic clubs and

one cultural and artistic school, bestowing Danang a unique national cultural identity. As such, it is considered as one of the best and attractive cultural centers of Vietnam.

### Box 2. Academic institutions in Danang

- Danang State University, composed of 4 Colleges
- Duy Tan Private University
- 3 junior colleges
- 7 technical high schools
- 5 vocational schools and 35 vocational centers
- 7 regular educational centers
- 16 senior high schools
- 48 junior high schools
- 85 elementary schools
- 165 kindergarten schools



## 1.3. The Value of Danang

With its important geographical location and favorable conditions, Danang has a strategic location economically and in terms of national security and defense. Situated in the center of Vietnam, it is the transport hub of the north-south rail, highway and air routes; the key point of the East-West corridor to the highlands and neighboring countries in the Mekong River sub-region, with several seaports, an international airport and abundant and diverse resources.

### Historical and Cultural Values

Danang harbors several unique cultural heritages, such as the Cham Sculpture Museum, the Museum of the Revolution, the Ho Chi Minh Museum, the Dien Hai Fortress, that are located in the heart of the City and number of pagodas, communal houses built several centuries ago, all together with Marble Mountains are very attractive to many tourists.

The Cham Sculpture Museum has the finest collection of Champa sculpture in the world. It has about 300 sculptural pieces where it showcases impressive sandstone carvings. Built in 1915, it is the only museum dedicated in the preservation of the unique Champa sculptural heritage in the World.

The Ho Chi Minh Museum emphasizes President Ho Chi Minh's life by featuring exact replicas of the style, materials and interior decoration of the President's house on stilts in Hanoi. War memorabilia showing the resistance against the French and Americans are also on display. The Dien Hai Fortress was built in 1813 and completed in 1828. Built to defend Danang, this monument played an important role in defeating the French attacks during 1858-1860.

### Box 3. World Cultural Heritages close to Danang

1. **Hoi An:** located approximately 30 km south of Danang. Once known as Faifo, it was known the world over since it was one of Southeast Asia's major international ports from the 17<sup>th</sup> to the 19<sup>th</sup> century. UNESCO recognized Hoi An as a World Cultural Heritage Site in 1999.
2. **My Son Holyland:** located 70 km south-west of Danang is a complex of Champa architecture. UNESCO recognized My Son as a World Cultural Heritage Site in 1999.
3. **Hue:** located 100 km north of Danang. It served as Vietnam's political capital from 1802 to 1945 under the 13 emperors of the Nguyen Dynasty. UNESCO recognized Hue as a World Cultural Heritage Site in 1993.





## Natural Values

### Ecological Values

Coral reefs are present at the northern coast of Danang Bay and along the North and South Son Tra Peninsula. About 55 species of hard corals and associated invertebrates such as lobsters and bivalves are present.

The Son Tra Peninsula harbors diverse habitats, both on the land and sea that need to be protected and conserved. It has been declared as a marine park where an expansion of the total area being managed has been recommended.

In Danang's coastal waters, there are more than 500 species of fish, over 30 species of which are of high economic value. These include groupers, scads, mackerels and tunas. Twenty-three species of cuttlefish and squids belonging to three families are found around and beyond the Bay entrance at a depth of 15-90 m. About twenty-four species of shrimps are also present. The fishery sector of Danang significantly supports the seafood processing industry of the area.

The total agricultural area is 12,837 hectares. The major agricultural

products include rice, fruit trees, eucalyptus and pines trees.

The total forest cover is approximately 61,777 hectares.

Danang boasts its high quality sand deposits at Nam O with a reserve of about 7 million tons, which is important in the production of glass crystal. Granite deposits are also abundant for the production of building materials.

The Han River on the other hand is valuable for its multiple uses. It also serves as an area where the people of Danang can leisurely relax.

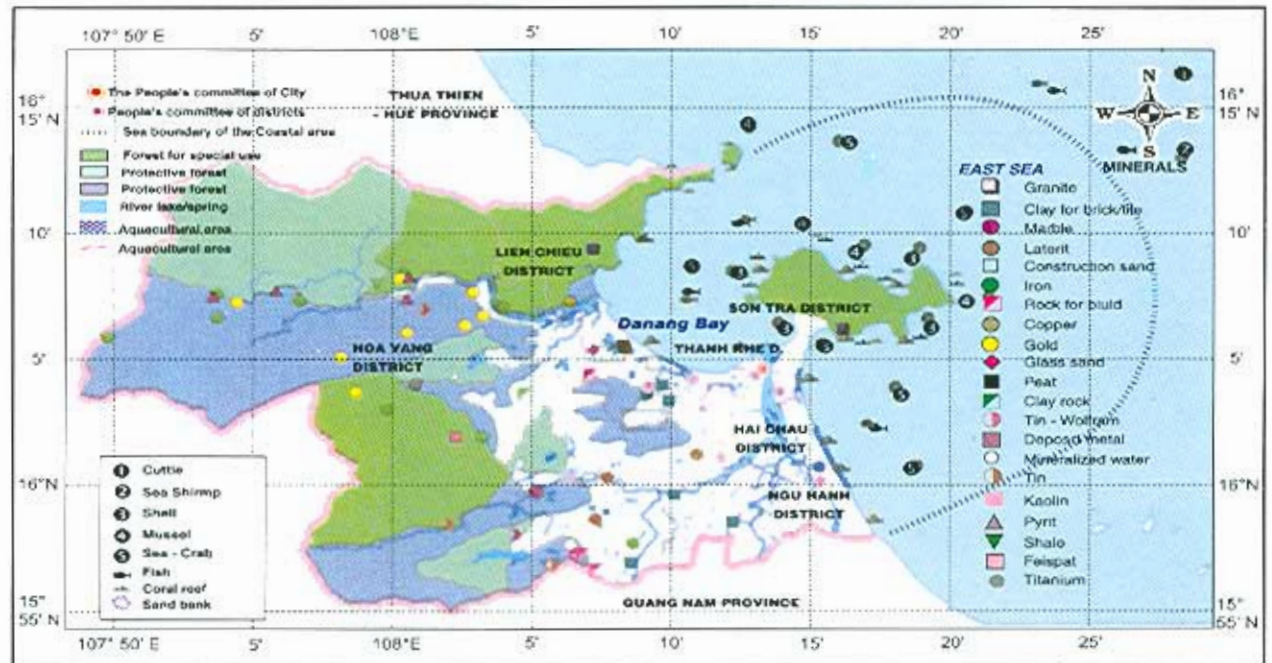


Fig. 5. The natural resources of Danang.

### **Tourism and Recreational Values**

With its strategic location, weather, history, economy and culture, Danang is becoming a famous tourist spot. It is dotted with spectacular landscapes such as the Ngu Hanh Son or Marble Mountains, Hai Van Pass, Son Tra Peninsula and Ba Na tourist resort.

Danang is famous for its fine sandy coast stretching from Hai Van Pass to the foot of the Marble Mountain. Along its 92 km coastline, numerous beaches such as those found in Nam O, Xuan Thieu, Thanh Binh, My Khe, Bac My An and Non Nuoc are present. The beaches are ideal for all kinds of marine sports.

Danang's proximity to three of the World Cultural Heritage Sites of Vietnam (Hoi An, My Son and Hue) described under historical and cultural values makes it an ideal base for tourism and daily excursions.

The master plan for tourism development of Vietnam identifies Danang as one of the three core tourist areas. It contributed 7.5% of the GDP of the whole City and it is projected to contribute 13% of the GDP by 2005. The Furama, which opened in 1997, is the first five-star sea-resort in Vietnam.



#### **Box 4. Famous landscapes and seascapes of Danang**

**Ngu Hanh Son or Marble Mountains:** located 8 km southeast of Danang. A legend says that the sea dragon came into the shore and laid an egg. After one thousand days and nights, the egg hatched and out stepped a beautiful young lady. The broken shell fragments grew larger until they were transformed into five separate mountains that was named by the King of the Nguyen Dynasty after each of the five essential elements that make up the universe, namely water, wood, soil, metal and fire.

**Hai Van Pass:** literally means "Sea and Cloud", is the highest and longest pass in Vietnam with the north-south national highway zigzagging through it for almost 20 km. From the highest point of the pass (496 m above sea level), one can get a bird's eye view of the rich lowlands and the City of Danang.

**Son Tra Peninsula:** a mushroom like outgrowth located 12 km away from the City, is a declared marine protected area. It is fringed with white sand beach supporting a number of resorts and water-related activities.

**Ba Na Resort:** located 28 km west of Danang along the Hoa Vang district is noted for its cool climate, diverse flora and fauna and picturesque landscape. It is situated 1,482 m above sea level and the summit is a plateau.



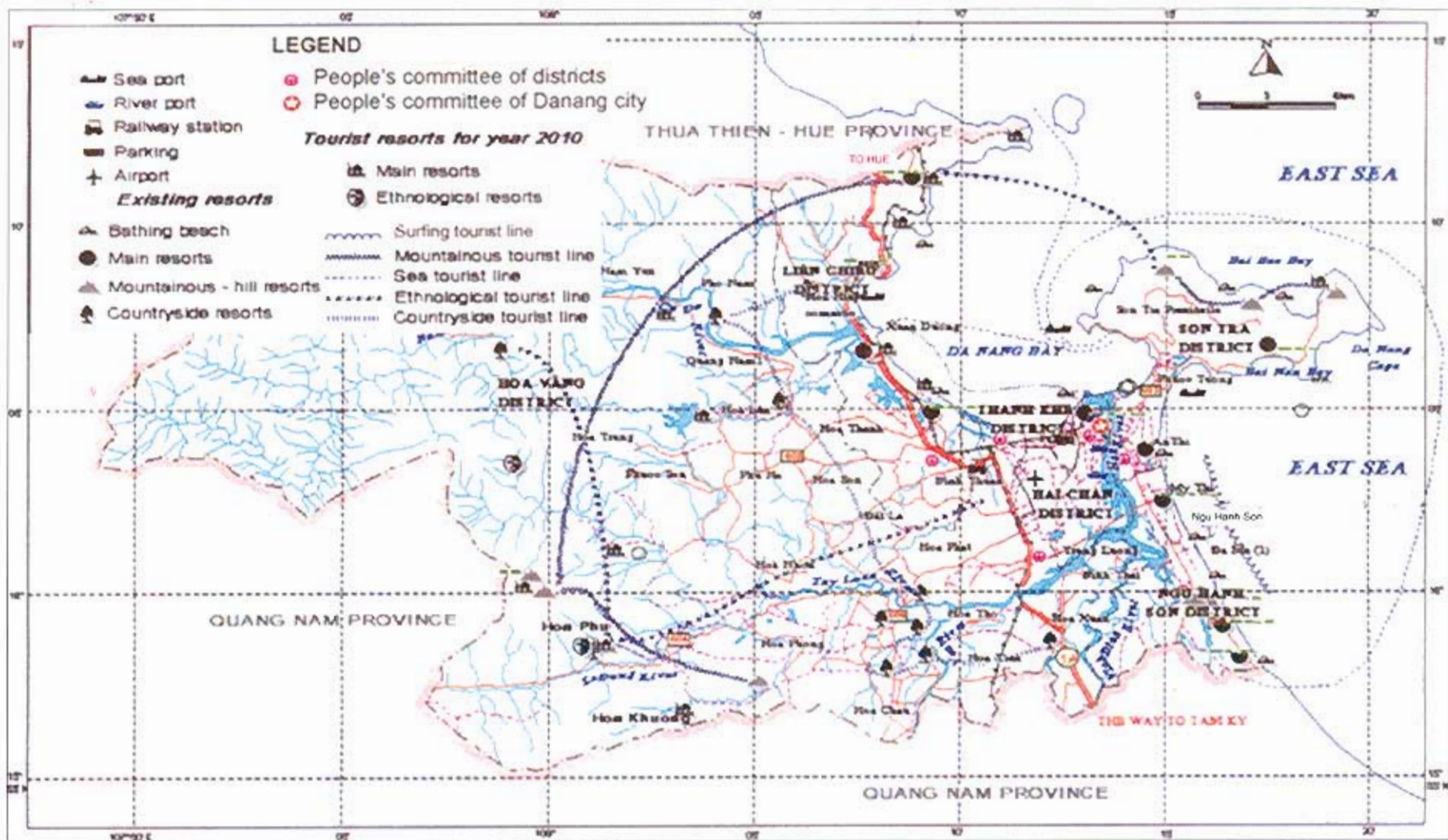


Fig. 6. Status and potentials of tourism in Danang City

## Economic Values

Danang is one of the most important economic growth centers of Central Vietnam. The GDP growth rate (period 1996 - 2000) is 10.33%. According to the economic structure of Danang in 2000, service takes up 51.7%; industries and construction - 40.7%, and agriculture, forestry and fisheries - 7.6%.

### Fisheries and Aquaculture

The Danang fishery contributes significantly to the total fisheries production of Vietnam and plays important role in supplying raw materials for seafood processing and animal feed processing. In 2000, the exploitation yield is about 27,500 tons.

### Settlement and Development Areas

Danang has been earmarked to become the cultural, commercial and industrial focus of Central Vietnam. The City has an international airport, a number of seaports, railway and developed roads. It is also the gateway to the Pacific Ocean of the trans-Asian shipping route. These facilities promote trade within its neighboring countries and with the rest of the world.

Danang has several ports that can accommodate all kinds of vessels. The Danang seaports consist of Tien Sa and Han River Port, the



former being the third largest commercial port in Vietnam. The Lien Chieu Seaport is another large commercial port, where the Hai Van Cement Factory is using its 2 piers. Other ports include My Khe, Nai Hien, Song Thu and Hai Quan.

Danang has three industrial zones that support a wide range of industrial activities. The Danang Industrial Zone, located west of the international airport supports non-polluting and hi-tech industries such as electronics assembly, garments and handicrafts. Hoa Khanh Industrial Zone, located east of the international airport, supports light industries such as engineering, processing of agricultural, forestry and aquatic products and petrochemicals. The Lien Chieu Industrial Zone, located north of the international airport, supports heavy industries such as steel rolling, rubber, cement, chemical and building materials production.

There are 3,820 industrial and handicraft establishments, which include government-owned (11 centrally- and 21 locally-owned enterprises), 3,769 privately-owned (42 cooperatives, 177 private enterprises and 3,550 manufacturing households), and 19 foreign invested enterprises.

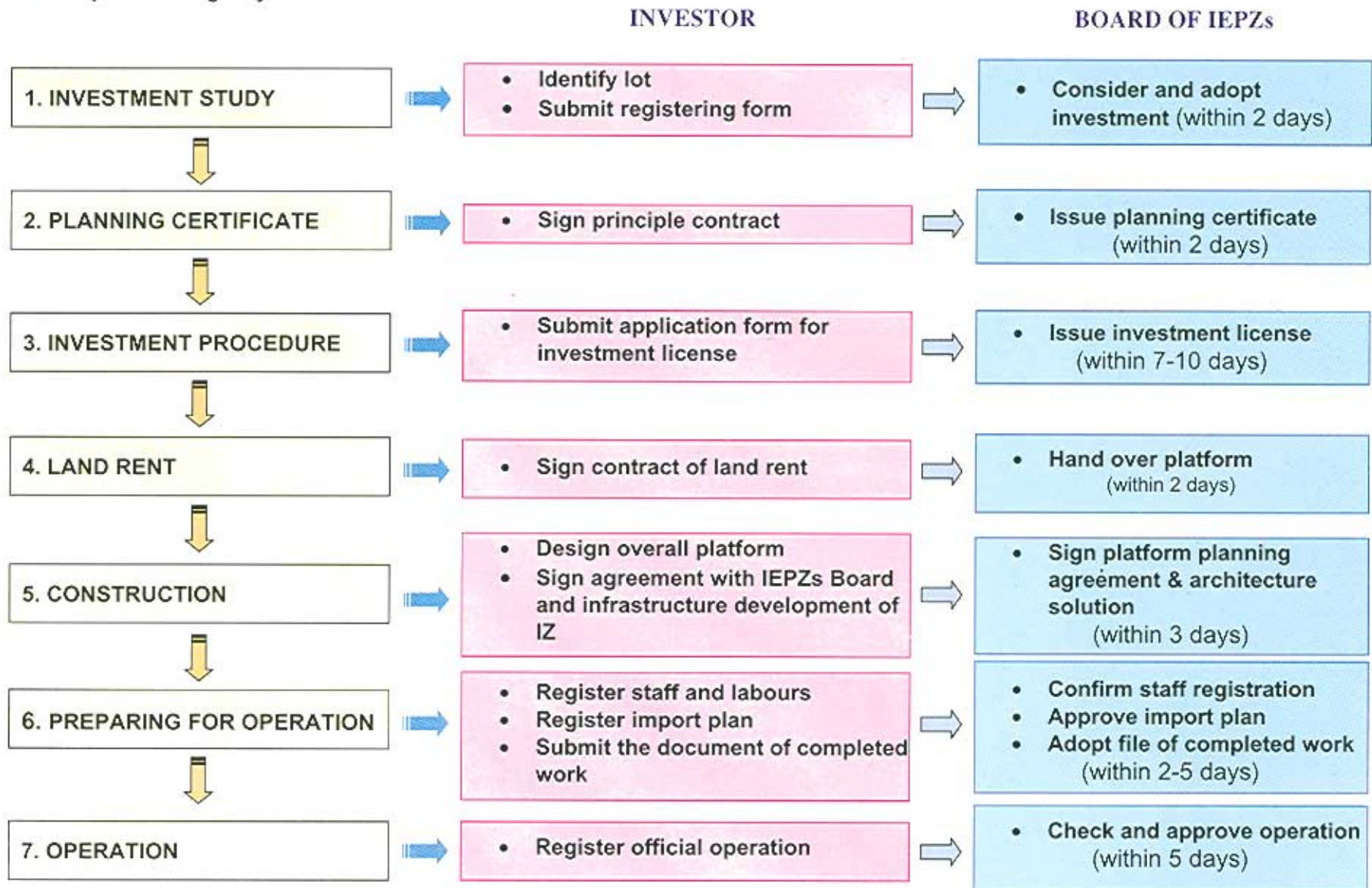
#### Box 5. Export and import items

**Export items:** frozen, dried and fresh sea products and foodstuffs, eucalyptus chips, rattan furniture, wooden products, silk products, towels, leather and sport shoes, various kinds of garments, embroidered products, fine arts and lacquer products, plastic products and candles.

**Import items:** fertilizer, oil and gas, construction materials (e.g., cement, iron, steel), motorbike spare parts, materials for tailoring, beer and wine manufacturing, plastic household electrical, electronic and mechanical appliances and vehicles.



Fig. 7. Industrial Zone Foreign capital Investment projects Roadmap in Danang City.



## 1.4. Threats

### Threats

- Pollution from land- and sea-based sources (i.e., sewage, industrial wastes, agricultural run-off, hospital wastes, mining, oil spills, etc.).
- Over-exploitation of resources.
- Habitat degradation.
- Multiple use conflicts due to inadequate planning.
- Weak management capacity in meeting the needs of development.
- Natural disasters such as typhoons, flooding, storm surges, coastal erosion, erosion of river banks and forest fires.
- Global climate change.

### Implications

- Depletion of renewable and non-renewable coastal and marine resources.
- Social and economic activities would be seriously affected and job opportunities will be reduced.
- Increased risk to human health due to contaminated seafood and increased pollutants in the environment.
- Negative effects on ecosystem resilience and productivity.
- Loss of landscapes and recreational value resulting to reduction of benefits to coastal communities.
- Loss of coastal protection and altered morphology of shorelines.
- Negative impacts from natural disasters and environmental incidents/accidents.
- Increased need for management interventions.

#### Box 6. Facts on global climate change and sea level rise

- During the past 100 years, the average temperature of the Earth has increased by 0.6°C.
- By the end of this century, it was predicted that the average temperature could increase by 1-3.5°C.
- If the average temperature of the Earth will increase by 3.5°C, many island countries could be submerged in seawater.
- In Vietnam, if the average temperature will increase by 2°C, the whole Mekong Delta could be submerged in seawater.



## 1.5. Challenges

### *Limited knowledge and low public awareness on environmental protection and conservation.*

- Limited understanding on the values of natural resources and the environment.
- Limited understanding on the concept of sustainable development.
- Lack of budget for education and training on coastal and marine environmental management.
- Lack of database on the coastal and marine environment.

### *Increased pollution loads and degradation of natural resources.*

- Inadequate waste collection and treatment of particularly toxic and hospital wastes as well as solid wastes generated by the residential areas at the coast.
- Overexploitation of forest, marine and mineral resources.

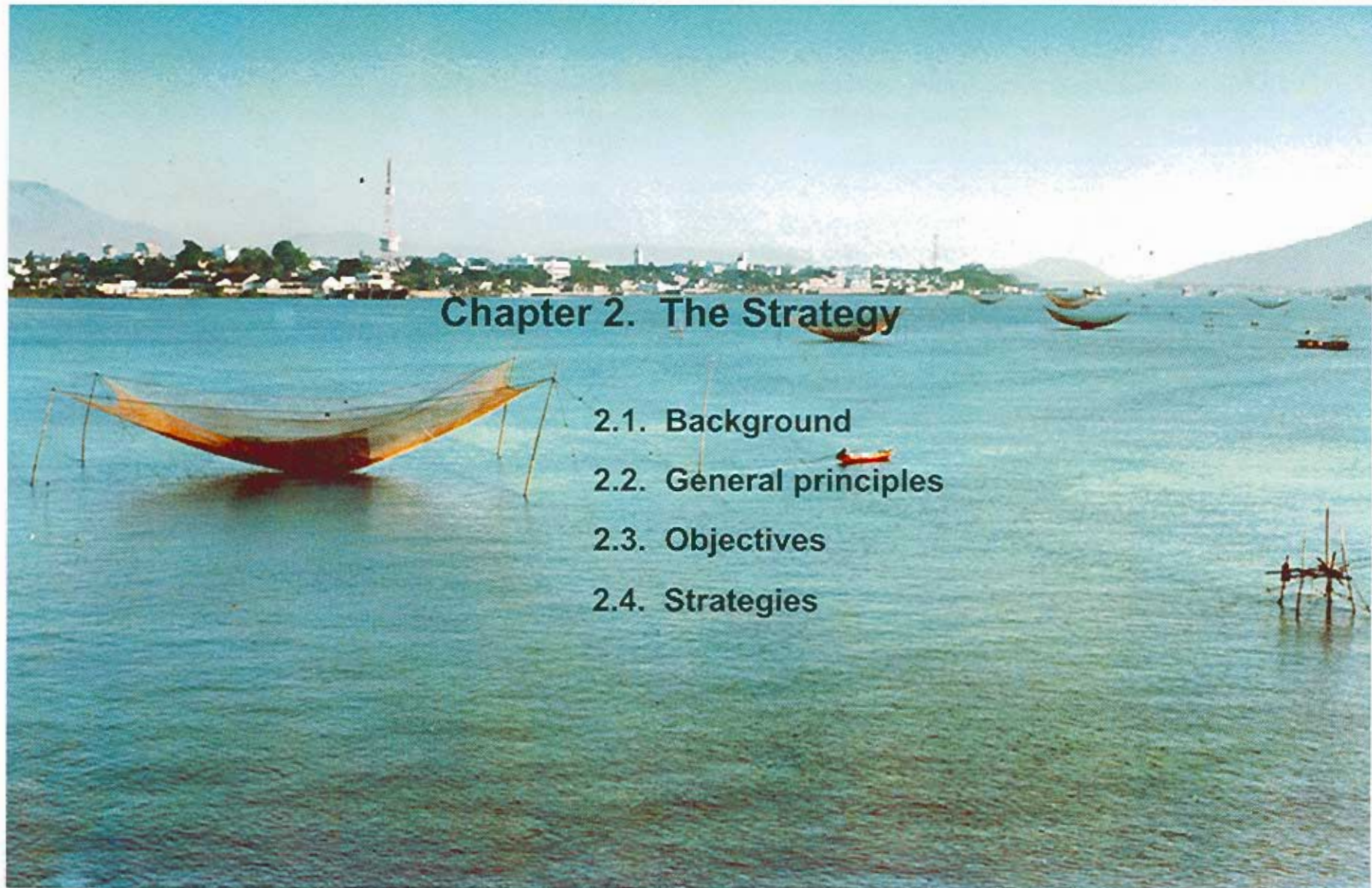
### *Weak local capacity in environmental management.*

- Limited management capacity.
- Lack of manpower.
- Lack of policy instruments (legal, economic, technical).
- Sectoral and territory-oriented management resulting to lack of integration and coordination.

### *Inadequate planning for the coastal and marine areas.*

- Irrational use and improper planning and development of the coastal area leading to loss and degradation of habitats.
- Lack of integrated land and sea use planning.





## Chapter 2. The Strategy

- 2.1. Background
- 2.2. General principles
- 2.3. Objectives
- 2.4. Strategies

## 2.1. Background

### *Key International Agreements relevant to Coastal and Marine Environmental Management which Vietnam has Signed and/or Ratified*

- United Nations Convention on the Law of the Sea, 1982 (UNCLOS).
- Rio Declaration on Environment and Development, 1992.
- Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971 (RAMSAR); Amended by Paris Protocol on 3 December 1982.
- Convention on the Protection of the World Natural and Cultural Heritage, 1972 (World Heritage Convention).
- Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1994 (CITES).
- United Nations Framework Convention on Climate Change, 1992 (UNFCCC).
- Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989 (Basel Convention).
- Convention on Biodiversity, 1992.
- Convention for the Prevention of Pollution from Ships, 1973, and the Protocol of 1978 (MARPOL 73/78).
- United Nations Declaration on Clean Production, 1999.

***Important National Policies and Legislative Documents relevant to Coastal and Marine Environmental Management which have been and/or currently being developed***

- Report of the Central Committee of the Communist Party of Vietnam, No. VIII on Socio-economic Development Strategy, the 9<sup>th</sup> National Congress of Communist Party of Vietnam, April 2001.
- Directive No. 36/CT-TW of the Politburo of Vietnam on the enhancement of environmental protection during the period of industrialization and modernization, 25 June 1998.
- Environmental Protection Law, 1994.
- National Strategy for Environmental Protection for 2001 – 2010 (the draft has been submitted to the Government in June 2000).
- National Plan for Environment and Sustainable Development (NPESD), 1991-2000; which provides a general framework for the management of environment in Vietnam, including the marine and coastal environment.
- National Biodiversity Action Plan (BAP) (Approved by the Government according to Decision No. 854/TTg; 22 December 1995).
- National Program on Marine Protected Areas Planning (submitted by MOSTE for approval).
- National Program on Hunger Elimination and Poverty Alleviation.
- National Policy on Economic Development of Vietnam's Renewable and Non-renewable Marine Resources.
- National Oil Spill Response Plan for the Period 2001-2010 (approved by the Government following the Decision of Prime-Minister No. 129/2001QD -TTg on 29 August 2001).
- Relevant sectoral policies and plans.



***Key Policies on Coastal and Marine Environmental Management of Danang City which has been and/or currently being developed***

- Report on the Socio-economic Development plan for the period 2001-2005, 18<sup>th</sup> Communist Party Congress of Danang City, 2001.
- Regulations on Environmental Management and Protection in Danang City, 2000.
- Environmental Protection Strategy for 2010 of Danang City, August 2000.
- Project on Absolute treatment of Establishments causing serious pollution in Danang City (Approved in December 2000 by the People's Committee of Danang City and being currently implemented).
- Industrial Pollution Management Program for the period 2001 – 2005 (Approved in September 2001).

## 2.2. General Principles

- ◆ The coastal and marine environment of Danang shall be managed to ensure preservation and conservation of the ecosystems and the well-being and dignity of the people.
- ◆ The right to development must be fulfilled so as to equitably meet development and environmental needs of present and future generations (Rio Declaration, Principle 3).
- ◆ The use and management of coastal and marine resources and environment shall respect natural systems and processes.
- ◆ Rational use of resources should be encouraged and irrational use avoided, minimized and eliminated.
- ◆ Close relationship between sustainable use of coastal and marine resources, poverty alleviation and environmental protection should be fully understood and respected.
- ◆ The "precautionary principle" endorsed at the United Nations Conference on Environment and Development shall be strictly applied in the absence of convincing evidence.
- ◆ Activities within one area should not cause negative impacts to other areas.
- ◆ Conservation and development have a mutual relationship in sustainable development.
- ◆ Environment and resource management are both the right and responsibility of every one.
- ◆ Stakeholder participation should be always be included when addressing environmental issues.
- ◆ The "polluter-pay principle" should be applied.

## 2.3. Objectives

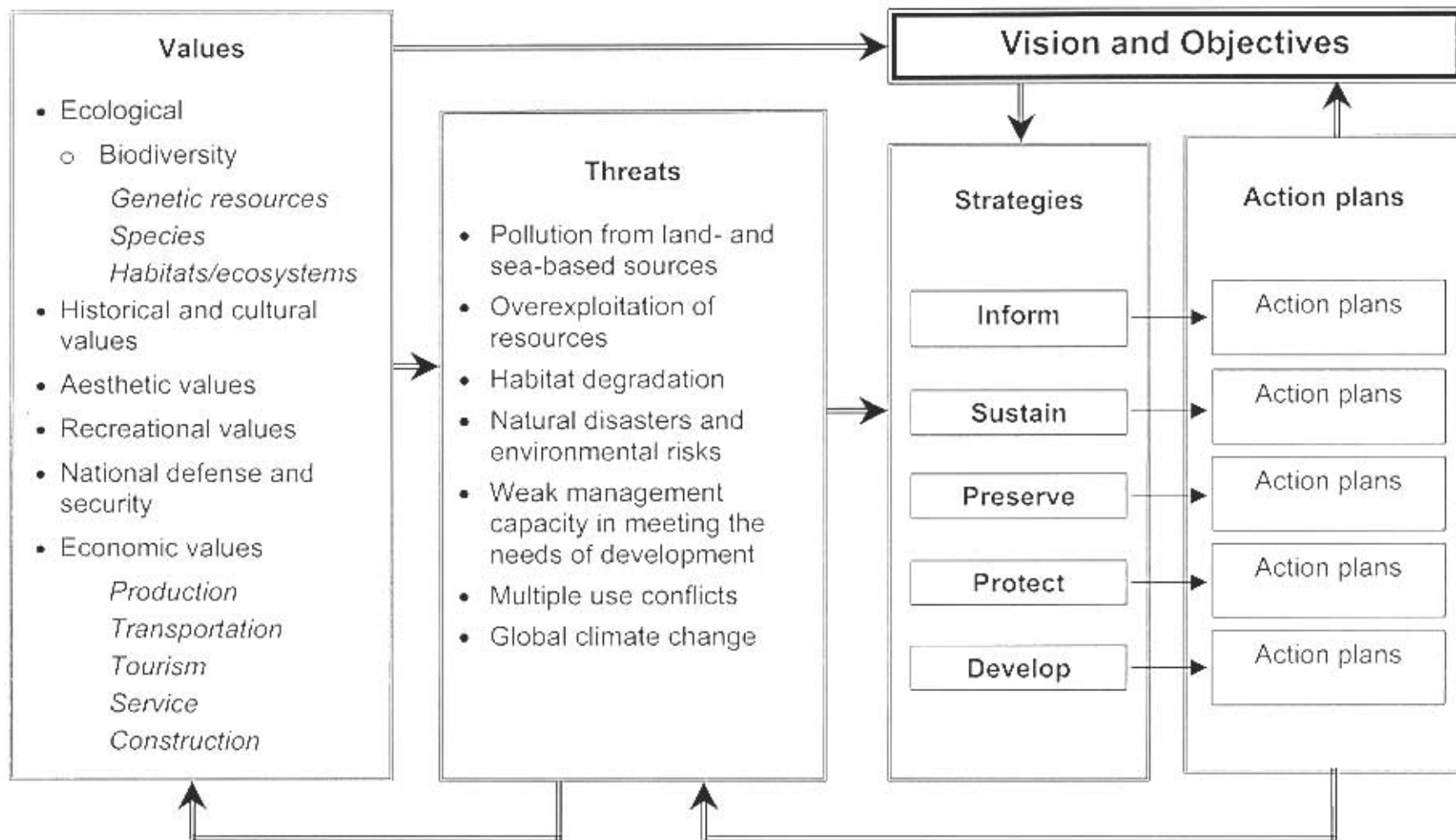
General objective:

*Protect and improve the environmental quality of the coastal and marine environment of Danang; promote rational use of resources while allowing development to proceed, thus ensuring sustainable development and attaining the vision set by the people.*

Specific objectives:

- Prevent and mitigate environmental pollution by improving the quality of water, air and soil, particularly in industrial parks, urban areas, hospitals, tourism sites, rivers and estuaries and ports.
- Prevent resource degradation in the coastal and marine environment by promoting rational use of resources; protecting and conserving biodiversity as well as cultural and historical values.
- Enhance public awareness on natural resource and environmental protection.
- Build the City's capacity in coastal resource and environment management.

Fig. 8. Approach to Achieving Objectives





## 2.4. The Strategies

- Strategy 1 - Inform**
- Strategy 2 - Sustain**
- Strategy 3 - Preserve**
- Strategy 4 - Protect**
- Strategy 5 - Develop**

## Strategy 1 - Inform

***Strengthen the communication, education and information exchange between stakeholders in order to raise awareness and mobilize the participation of different sectors, organizations and communities in managing and protecting the coastal and marine environment and their resources.***

### Principles:

- The people of Danang City should be informed about the values and threats to their coastal and marine environment and their resources.
- Public awareness and education are important and have long-term impacts.
- Communication and public education ensure strong support of all stakeholders particularly in getting their consensus on the protection and sustainable development of the coastal area.
- Strengthening the capacity of management bodies/lead agencies for environmental management is important for maintaining communication and awareness programs of the City.
- The rights of the local communities in the coastal area should be respected.



## Inform

**Objective 1: Enhance public awareness on coastal and marine environment and their resources in order to strengthen the roles and responsibilities of all stakeholders of the coastal area of Danang.**

### Action Programs

*Enhance public awareness on coastal and marine environment and resources including related management problems.*

- Developing effective public awareness and education program.
  - Identify target groups for application of appropriate public awareness approach/tactics.
  - Focus on major topics such as resource and environment values, threats, population and environment, natural resources and environmental protection measures, rights and responsibilities in the use of the coastal area and ICM.
  - Consolidate the contents and quality of awareness and education program.
- Promoting wide participation of stakeholders in resource and environment protection
  - Inform stakeholders the negative impacts of resource exploitation.
  - Encourage stakeholders to develop a common vision in managing and protecting the coastal area.
  - Identify the information needs and provide them to the stakeholders.

*Enhance the capacity and improve means of implementing public awareness and education campaign.*

- Promoting the effective use of information centers and agencies of the City.
- Improving the mechanism for information dissemination.
- Developing and setting up communication networks.
- Developing and strengthening the capacity of a core group of communicators.
- Developing effective mechanisms for coordination and cooperation among sectors involved in environment-related communication activities.



**Objective 2: Strengthen the effectiveness of communication and public awareness activities.**

**Action Programs**

*Develop an information management system on the coastal and marine environment and resources of Danang.*

- Establishing an information network.
- Developing databases on environment.
- Diversification of information services.
- Establishing linkage with existing national information networks.
- Developing and improving policies for incentives on information service and propaganda.

*Develop and improve education programs on environment in academic institutions.*

- Developing appropriate education programs for all academic levels.
- Linking regular training and in-service training programs with mass media.

*Develop pilot sites and promote them for replication.*

- Developing pilot sites on community-based beach clean-up and waste segregation.
- Developing pilot industrial establishments for ISO 14000 implementation.
- Developing pilot establishments on the implementation of green production, food safety and resource preservation programs.

*Establish research and development programs to upgrade the livelihood of local communities.*

- Determining the development potential and opportunities for local communities.
- Enhancing vocational training and job creation to reduce the unemployment rate.
- Promoting family planning
- Identifying and implementing means to eliminate hunger and alleviate poverty.





## Strategy 2 - Sustain

*Ensure the sustainable use of resources and environment in the coastal area of the City.*

### Principles:

- Satisfy the needs of the present generation without compromising the needs of the future generations.
- Reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.
- Biological diversity and its components must be preserved for their intrinsic value as well as their ecological, genetic, economic, social, scientific, educational, cultural, recreational and aesthetic values.
- Cooperative measures to conserve and manage coastal and marine resources are important.

**Objective 1: Conservation and restoration of biodiversity.**

**Action Programs**

*Develop strategic plan on the conservation and protection of biodiversity.*

- Developing policy to integrate management of natural/biological resources into economic development, business and investments.
- Determining coastal and marine areas of natural and biological significance and identifying the allowable limits of their use.
- Cooperating with other provinces/cities to conserve and manage important resources with transboundary importance, particularly the migratory species.

*Restore habitats and resources of high natural value and biodiversity.*

- Identifying major activities and processes, which threaten the coastal and marine areas of natural and biological significance.
- Eliminating irrational use and improper development, and conflicts of use in the development plans of the City.
- Developing capacities of sectors and local governments in implementing programs on sustainable environmental management, including rehabilitation of habitats.
- Developing legal and economic tools on restoration and compensation for damage to habitats and biodiversity.

## Sustain

### Objective 2: *Improve and maintain surface and groundwater quality in compliance with standards.*

#### Action Programs

*Strengthen the compatibility and balance of freshwater and marine water use.*

- Improving economic development policies, taking into account the value of water as important catalyst for social progress and economic growth, the multi-sectoral conflicts in the use of and benefit from water sources, and ecological impacts of infrastructure development projects.
- Establishing policies on water resource development and management, addressing consumptive and non-consumptive use, food security, and impacts to public health and natural resources.
- Planning on the rational use of water resources and pollution prevention.

*Integrate the water quality concerns of the City into the National Program on Marine and Coastal Environment Management.*

- Developing and implementing watershed development and management programs at Vu Gia-Thu Bon and Cu De.
- Applying standards on water quality ensuring the safety of ecosystems and public health.
- Integrating water resource development and protection into land- and sea-use plan.
- Improving and implementing legal and economic instruments to promote rational and sustainable use of coastal waters.



**Objective 3: Equitable and sustainable fisheries and conservation of aquatic living resources.**

**Action Programs**

***Strengthen cooperation with other cities/provinces on fisheries management.***

- Raising awareness on the importance of coastal and marine habitats and aquatic living resources.
- Regulating fisheries activities of foreign ships/boats as well as those from other provinces/cities in the marine and coastal waters of Danang.
- Assessing the effectiveness of aquatic living resource management.

***Rational harvesting of aquatic living resources.***

- Applying the ecosystem management approach in fisheries planning and development.
- Encouraging and promoting offshore fishing programs and applying measures to restore onshore over-exploited resources.
- Promoting the use of modeling and observational studies for the management and rational use of shared aquatic living resources.
- Promoting the effective enforcement of fisheries-related laws/regulations.

***Integrate fisheries management into coastal management programs of the City.***

- Developing appropriate measures to protect the rights and livelihoods of fishers.
- Implementing effective measures to eliminate destructive fishing and over-fishing which result to habitat loss.
- Building capacity in aquaculture to ensure fish stock and conservation of aquatic living resources diversity.
- Promoting innovative fisheries management for different purposes, including commercial, recreational, tourism and cultural to increase benefits to the community.

## Strategy 3 - Preserve

*Preserve biodiversity (genes, species and habitat and ecosystem) and areas of natural, social, historical and cultural significance in Danang.*

### Principles:

- Pristine habitats, natural resources and areas of natural, social, historical and cultural values should be preserved for the next generation.
- Wetlands should be preserved to maintain their ecological functions as regulators of water regimes and as habitats for a variety of flora and fauna.
- Use effective policy tools for the protection and conservation of environment and natural/cultural heritages.

## *Preserve*

### **Objective 1: *Establish coastal and marine protected areas.***

#### **Action Programs**

##### *Assess and prioritize areas for protection.*

- Defining selection criteria for protected areas based on:
  - Presence of rare, endangered and threatened species;
  - High biodiversity;
  - Valuable fish resources, and
  - Spawning/nursery grounds for economically important species including migratory species.
- Defining boundaries for protected areas, including core and buffer zones.
- Setting priority for protected areas on the basis of their ecological significance and economic value.

##### *Development of mechanisms for protected area management.*

- Adopting an integrated approach in planning and management of protected areas.
- Enhancing management capacity by mobilizing all stakeholders and encourage their participation.
- Developing an integrated land- and sea-use plan.
- Institutionalizing related legal, administrative and economic instruments.



## Preserve

### Objective 2: Preserve rare, threatened and endangered species and genetic resources.

#### Action Programs

##### *Improve and enforce regulations on the protection and preservation of species under threat.*

- Reassessing the list of species under threat including the associated habitats.
- Developing ecological sensitivity maps.
- Developing effective partnerships between conservation groups, scientists, concerned sectors and communities.
- Maintaining strict control over the implementation of policies, regulations and related legislative documents on the preservation and protection of species under threat.



Langur -  
*Pygathrix  
nemaeus  
nemaeus*

##### *Restore and manage rare and endangered species.*

- Mobilizing stakeholders to develop restoration and recovery strategies.
- Formulating and implementing action plans on restoration.
- Levying economic incentives and disincentives.



Pheirardia  
ocellata -  
*Rheinartia  
ocellata  
ocellata*

##### *Develop a management system ensuring safety of species under threat including genetic resources.*

- Enhancing enforcement measures to stop hunting and trade of wild animals and plants.
- Adopting appropriate measures for sustainable exploitation of species of commercial significance.
- Establishing gene conservation areas.
- Preventing the introduction of and control of alien species that threaten local species, habitats and ecosystems.
- Establishing cross-sectoral management system, which includes the Military Forces, Port Authority, Border Guards and districts/communes adjacent to protected areas.



White  
pheasant -  
*Lophura  
edwardsii*

### Objective 3: Restore and preserve areas of social, natural, ecological, historical and cultural significance

#### Action Programs

##### Identify priority areas for preservation and restoration.

- Improving criteria for assessing values of priority areas.
- Assessing and prioritizing areas that need restoration/preservation, with the participation of local communities and relevant stakeholders.
- Developing guidelines for the protection and preservation of priority areas.

##### Manage important natural historical and cultural heritage sites.

- Recognizing the values of the sites with reference to national and international standards.
- Improving the control and implementation of related policy, laws and regulations.
- Improving the management scheme for conservation of and public access to the sites.

##### Develop and promote eco-tourism.

- Conducting exploration/survey to identify sites suitable for eco-tourism development.
- Establishing strategic plans for eco-tourism development.

## Strategy 4 - Protect

*Protect ecosystems, environment, human health and society from risks caused by natural disasters and human activities.*

### Principles:

- The environment should be protected from potential damages.
- Protection of coastal and marine environment and their resources brings direct and indirect benefits to all stakeholders and future generations.
- Environmental pollution should be prevented, mitigated and controlled to reduce if not eliminate the risks associated with it.
- The polluter shall bear the cost of pollution through economic instruments and internalization of environmental costs.



**Objective 1: Protect the quality of coastal waters, particularly in Danang Bay.**

**Action Programs**

***Protect the water quality of Han and Cu De Rivers.***

- Assessing pollution sources and loads from watersheds.
- Strengthening upland forest management.
- Regulating sand/gravel exploitation in rivers.
- Stop illegal mineral mining activities.
- "Absolute treatment" of manufacturing units that cause severe environmental pollution.
- Developing integrated waste management program.

***Conduct environmental risk assessment for Danang Bay***

- Upgrading/improving criteria/indicators on coastal water quality.
- Implementing and improving environmental monitoring with emphasis on water quality, sediment and biological resources.
- Assessing pollution loads from land- and sea-based sources.
- Assessing environmental risk to human health and ecosystem.

***Develop program on community-based beach clean up.***

- Conducting communication campaigns to raise awareness of coastal communities.
- Identifying and implementing innovative economic models to improve environmental sanitation in coastal communes.
- Strengthening cooperation between key stakeholders such as Danang URENCO, Department of Tourism, DOSTE and communities involved in coastal and marine environmental management.

**Box 8. Priority risks**

- |  |   |
|--|---|
| - Solid waste                            | - Flood and inundation                  |
| - Sewage                                 | - Coastal erosion                       |
| - Oil spills                             | - Sand, gravel and minerals mining      |
| - Industrial waste                       | - Hospital/toxic/hazardous waste        |
| - Toxic war chemicals stored underground | - Coastal habitat destruction/pollution |
| - Banned pesticides                      | - Destructive fishing/overfishing       |
| - Saltwater intrusion                    |   |

## Protect

### Objective 2: *Protect quality of ground and surface water sources.*

#### Action Programs

*Develop plans on and determine investment opportunities for the rehabilitation and protection of polluted rivers and lakes.*

- Developing plans to manage sewage discharges so as to alter if not reduce the volume discharged to enclosed inland water bodies.
- Cleaning and dredging of heavily polluted sites.
- Strengthening enforcement of environmental laws and regulations.
- Putting priority for investments to manage hot spots such as the Phu Loc River and Tram, Rong and Thac Gian - Vinh Trung lakes.

*Intensify control/management of pollution sources and protection of surface water resources.*

- Improving the infrastructure along industrial establishments and parks.
- Improving sewage collection and treatment system on the basis of the *Project on sewage and environmental sanitation of Danang City*, focusing on existing hot spots.
- Developing and implementing projects on treatment of hazardous wastes including hospitals wastes.
- Implementing plans for relocation of establishments that cause severe pollution.
- Managing trade and use of herbicides.
- Managing and treating remaining herbicides and other chemicals, particularly those remaining from the war.
- Terminating reclamation activities, which reduce water flow surface, increasing salinity intrusion.
- Predicting salinity intrusion into Han (Vu Gia - Thu Bon) and Cu De river systems, and developing scenarios to respond to salinization problem.

*Protect ground water resources.*

- Conducting primary investigation and monitoring of the City's ground water resources.
- Intensifying enforcement on and termination of illegal ground water exploitation.
- Developing sustainable utilization plan for the City's groundwater resources.

**Objective 3: *Protect forests and ensure the required green cover.***

**Action Programs**

***Strictly protect the natural, protective forests.***

- Controlling soil erosion due to surface runoff and forest fires.
- Implementing afforestation projects along the coast to prevent beach erosion.
- Balancing forest exploitation and replanting.
- Prohibiting illegal forest exploitation.
- Encouraging the use of bio-gas stoves to reduce harvest of wood and charcoal products from forests.
- Strengthening the forest ranger force and cross-sectoral cooperation in forest management.
- Enjoining communities that are situated near forested areas to actively participate in forest protection and management activities.

***Implement afforestation programs.***

- Implementing forest management programs by transferring land to interested households.
- Providing training and support on sustainable harvesting techniques to households that are involved in afforestation projects.
- Encouraging planting of perennial plants, which have protective value, particularly in arresting soil/sand erosion.

***Increase green cover in urban areas.***

- Planning on expanding the green cover of urban areas.
- Developing programs on replacing unsuitable trees.
- Prohibiting unnecessary cutting of trees in urban areas.
- Strict protection of century-old trees.
- Promulgating regulations on tree planting in urban areas.
- Developing areas for planting safe vegetables, flowers and ornamental plants.



## Protect

### Objective 4: *Recovery of clean up costs and compensation for environmental damages.*

#### Action Programs

##### *Recover cost of beach clean up from oil spills.*

- Study the international conventions related to the recovery of oil spill clean up costs and compensation such as the CLC and FUND.
- Developing regulations and procedures on assessing damages in accordance with the CLC and FUND conventions.
- Developing oil and chemical spill response plan for ports in Danang and adjacent areas.
- Developing regulations/agreements on the cost of services, equipment and materials used in the clean up operation.

##### *Recover compensation cost for damages caused by oil and chemical spills.*

- Study the international convention related to liability and compensation such as the HNS.
- Implementing the Basel Convention.
- Utilizing appropriate economic tools such as NRDA for appraising damages from transboundary marine oil spills and discharges of priority pollutants.
- Developing regulations, funds and financing mechanisms for damage compensation in compliance with the Central Government laws.

##### *Recover cost of beach clean up from domestic waste discharges.*

- Identifying and applying innovative mechanisms to encourage restoration of polluted/degraded areas such as granting of exclusive right to use of these areas.
- Setting up environmental restoration funds based on the "user and polluter pay" principle.
- Diversifying environmental investments through socialization of environmental protection activities.

## Strategy 5 - Develop

*Develop areas and opportunities that contribute to economic prosperity while protecting environment and preserving the ecological values of Danang.*

### Principles:

- The coastal resources are common assets of the society and should not be sacrificed for short-term benefits.
- The impacts of the present economic development to the future generations should be constantly considered.
- Economic growth and development should be in harmony with environmental protection.
- The precautionary principle, a conservative regulatory management approach should always be considered particularly in dealing with uncertainties.
- Cross-sectoral conflicts resulting to environment and resource degradation should be resolved by utilizing the ICM framework to enhance effective cooperation between sectors, agencies, organizations and communities.
- Strict compliance to national policy, laws and regulations, and international agreements that have been ratified/adopted by the Central Government should be observed.
- Standards, criteria and priorities on environment should reflect the overall condition of the environment.



## Develop

### Objective 1: Advance economic development in the coastal areas.

#### Action Programs

*Adopt and improve mechanisms that enhance community participation in planning and development processes.*

- Establishing and improving criteria to achieve major developments in the coastal area.
- Conducting stakeholders consultation and building up consensus in identifying environmental investment opportunities.
- Identifying and setting up priorities for coastal development in accordance with the stakeholders vision.

*Link socio-economic development with environmental management.*

- Developing SEMP for the City on the basis of the Coastal Strategy and Environmental Strategy of Danang for 2010.
- Protecting social, cultural and historical values that bring benefit to community and aligning development objectives in accordance with these values.
- Encouraging the development of coastal industries, which bring economic benefits while ensuring long-term environment preservation.
- Focusing on port development in deep water areas and applying restrictions on port expansion in shallow areas.
- Increasing the community's opportunity to access and derive benefit from sustainable use of marine and coastal resources and environment through:
  - Developing and promoting eco-tourism;
  - Restricting industrial and commercial activities that cause environmental pollution along the coast and riverbanks, and
  - Increasing the community's rights to gain benefits from the natural and cultural values of the coastal area.

*Develop marine functional zoning scheme to address use conflicts.*

- Assessing the values and threats to the natural resources.
- Identifying and classifying functional/ environmental zones.
- Developing criteria/standards for each environmental zone.
- Identifying management responsibilities of coastal users and development of multi-sectoral coordinating mechanism.
- Development of integrated land-sea use plan.



**Objective 2: Develop cooperation mechanism for sustainable environmental investments.**

**Action Programs**

**Improve policy and regulations for strengthening cooperation for environmental investments.**

- Improving coordination in environmental/resource management to reduce if not eliminate conflicts and jurisdictional constraints and responsibility of different sectors.
- Enhancing the awareness of sectors in solving cross-sectoral problems/issues and cooperation for effective environmental management.
- Developing clear guidelines/criteria for cooperation.
- Improving the approval process for environmental investment projects.
- Creating conditions favorable for environmental infrastructure, application of clean production technologies and support to science and technological services.

**Increase financial investments for environmental management:**

- Adequate provision of environmental equipment and services to communities in compliance with national policy, laws and criteria.
- Enhancing the City's capacity in identifying and realizing environmental investment opportunities.
- Providing guidelines/procedures and economic tools to the industries and communities for applying environmental financing mechanisms.
- Institutionalizing the environmental management system at the local level with the commitment of:
  - Implementing the SEMP;
  - Reviewing and approval of related development plans;
  - Enforcing the implementation of environmental laws/regulations/standards;
  - Monitoring and evaluating environmental quality, and
  - Adopting and implementing regulations on the cost of environmental services.

**Box 9. Environmental investment opportunity in solid waste management**

**Priority sites:**

- + **Coastal communes:** Man Thai, Nai Hien, Xuan Ha, Thanh Loc Dan, Hoa Hiep and Thuan Phuoc
- + **Tourism sites:** Ba Na, Suoi Da, Bai But
- + **Rural communities:** Hoa Phuoc, Hoa Phong.

**Priority Services/Facilities needed:** Waste segregation, collection, temporary storage, recycling facilities (paper, plastics, metals, cans).

## Develop

**Objective 3: Cooperate with other provinces, particularly Thua Thien - Hue and Quang Nam, in solving cross-regional environmental problems/issues.**

### Action Programs

*Identify and prioritize cross-regional problems/issues, particularly on:*

- Protecting and preserving the ecosystems/habitats and their resources (Han estuarine area, Danang Bay, coral reefs, fish nursery/spawning grounds).
- Timely response to environmental incidents/accidents (oil spills).
- Effective disaster control management (flood, inundation, forest fires).

*Improve EIA procedure while ensuring full participation of stakeholders in the planning and management of programs/projects of cross-regional character, particularly on:*

- Managing and utilizing water resources along the Han - Vu Gia - Thu Bon river system.
- Fishing and aquaculture in North Danang Bay area.
- Development and rehabilitation/expansion of seaports.
- Managing the exploitation of upland forest resources.

*Develop common environmental management programs to address the cross-regional problems/issues, such as:*

- Oil spill response plan at regional level.
- Flood and inundation control/response program.
- Fishery resource development program.
- Tourism resource management/development program.

**Objective 4: Strengthen inter-sectoral cooperation for implementation of environment/resource - related national/international policy/legislative instruments.**

**Action Programs**

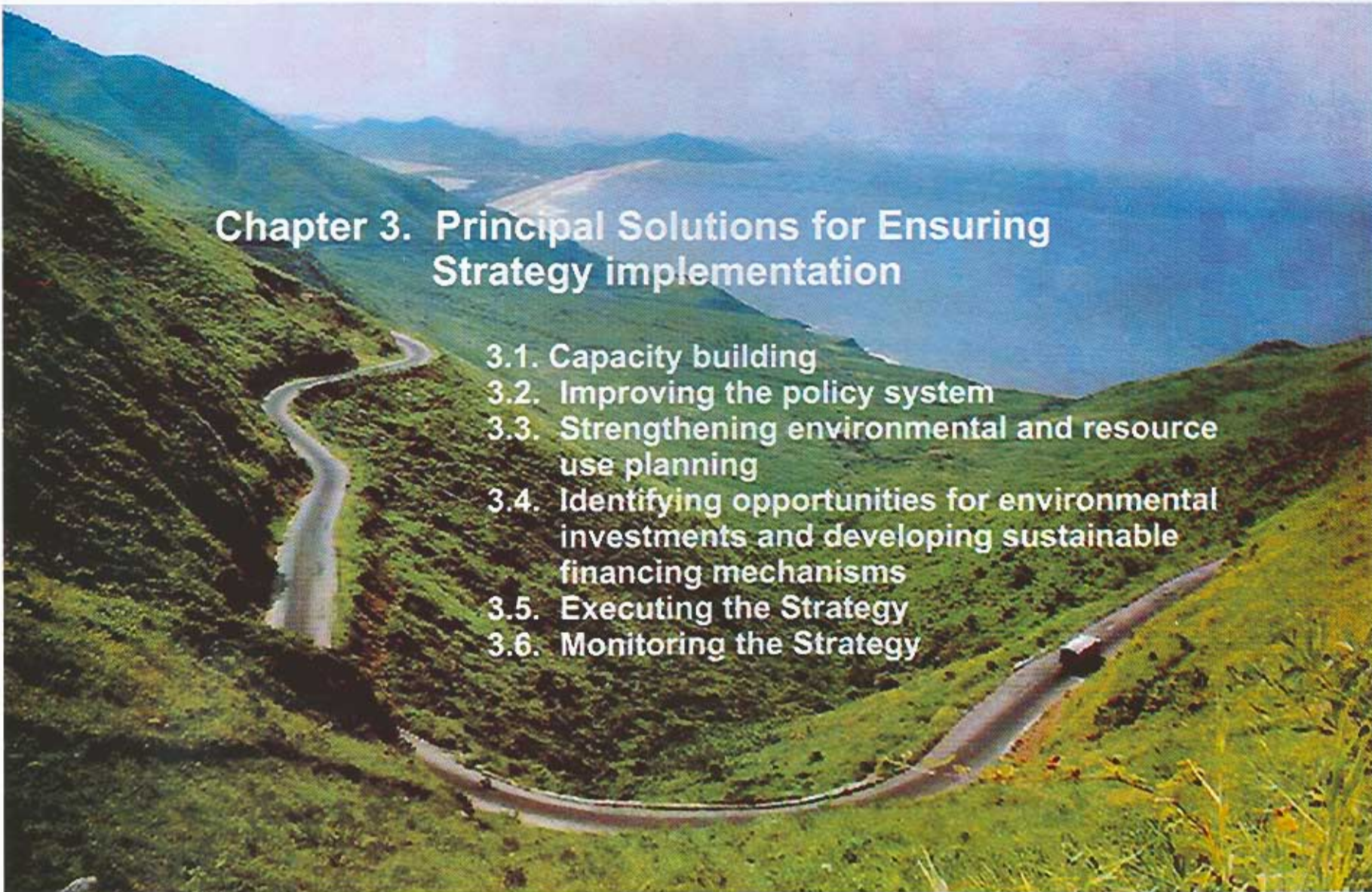
*Translate the principles and objectives of international conventions and agreements into desired management outcomes.*

- Evaluating the importance of environment-related international conventions in relation to national or local environmental policies/programs.
- Identifying gaps and constraints in the accession to relevant international conventions.
- Improving the planning process for environmental management with reference to the requirements of related international conventions.

*Improve the efficiency of international conventions and effectiveness of their implementation.*

- Integrating the contents of international conventions/ into the development of strategies/policies on environment/resource management.
- Strengthening the cooperation between the stakeholders who are directly affected by or derive benefits from the related international rules and standards, to ensure their participation and support.
- Calling on parties to related international conventions to provide technical support and enhance capacity in the Coastal Area management for Danang City.





## Chapter 3. Principal Solutions for Ensuring Strategy implementation

- 3.1. Capacity building
- 3.2. Improving the policy system
- 3.3. Strengthening environmental and resource use planning
- 3.4. Identifying opportunities for environmental investments and developing sustainable financing mechanisms
- 3.5. Executing the Strategy
- 3.6. Monitoring the Strategy

### 3.1. Capacity building

Enhancement of the capacity of management bodies/lead agencies is important for the successful implementation of the Strategy. Relevant tasks include:

- ✓ Strengthen the capability of lead agencies to implement the ICM framework and process in managing the coastal area of the City.
- ✓ Institutionalize the PCC into an authorized Inter-sectoral Committee to coordinate the coastal area management activities and the implementation of the Strategy.
- ✓ Improve the City's capacity in developing legislative documents.
- ✓ Training of consulting and executing staff in developing and implementing strategies and policies of the City government.
- ✓ Strengthen the City's capacity in environmental monitoring, particularly on marine environment and ground water.
- ✓ Promote management-oriented researches, such as environmental risk assessment/management, assessment of pollutant loads and distribution, ecosystem carrying capacity, economic valuation of natural resources and pollution treatment technologies.
- ✓ Improve the assessment and approval process of research proposals/results/products.
- ✓ Develop database and related integrated information management system.
- ✓ Use of sound scientific information/results and advanced tools/methods in policy and decision making process.

## 3.2 Improving the policy system

The policy system is a fundamental instrument for coastal area management. To implement the Strategy, it is necessary to:

- ✓ Check existing legislative documents and identify gaps and barriers to their refinement and improvement.
- ✓ Identify appropriate legislative documents to be developed.
- ✓ Assign different sectors and levels of government to develop coastal area-related policies based on wide stakeholder consultation through the direction of the Multi-sectoral Committee.
- ✓ Develop mechanisms to monitor and assess effective policy implementation and its refinement.



### **3.3. Strengthening environmental and resource use planning**

- ✓ Check, improve and ensure that existing development plans/planning are in accordance with sustainable development.
- ✓ Inform, educate and mobilize the wide participation of stakeholders in environmental and resource use planning.
- ✓ Develop environmental planning, considering the integrative function of ecosystems.

### **3.4. Identifying opportunities for investments and developing sustainable financing mechanisms**

- ✓ Widely disseminate the Strategy and execute the Commitment.
- ✓ Evaluate environment/resources and identify sound investment and development opportunities.
- ✓ Identify and promote partnerships with potential sponsors/investors.
- ✓ Support activities, which bring environmental benefit.
- ✓ Develop and improve policies/measures to support environmental investment.
- ✓ Develop and implement related pilot projects for replication.
- ✓ Develop sustainable financing mechanisms.

### 3.5. Executing the Strategy

**PC of Danang City:** Through the Multi-Sectoral Committee direct sectors, agencies, organizations and levels of government to implement the Strategy; coordinate the related activities, particularly with Central Government and international organizations; approve related documents and products within its authority; check and adjust the Master Plan on Socio-Economic Development of the City in the compliance with the Strategy.

**Sectors/departments:** Identify their rights and responsibilities in the Strategy implementation; check and adjust respective sectoral development plans; develop and implement action programs related to their sectors; actively involve in identifying environmental investment opportunities; cooperate with and support other sectors in the Strategy implementation to achieve the common Vision; develop network and coordinate the activities of various organizations to support the Strategy implementation.

**PC of districts:** Check and adjust development plans/planning of the districts on the basis of eliminating conflicts and ensuring maximum benefit to all sectors and coastal users without compromising the environment and resources; develop environmental protection plans for the areas within their jurisdiction; mobilize community participation and other district's resources for environment/natural resources protection.

**PC of communes:** Participate in adjustment and implementation of development plans/planning of the City, districts and sectors; mobilize local community to implement related regulations and participate in activities associated with the Strategy.

**Civil associations:** Aware, educate, mobilize and organize communities to support and participate in the development and implementation of the actions programs.

**Research institutions and consulting agencies of the City:** Provide knowledge and expert advise related to the Strategy implementation; provide sound scientific information and results to support policy and decision making; develop and implement research programs to provide information/advice needed for the Strategy; strengthen the capacity of the City in science and technology through training and education programs.

**Communities:** Support and actively involve in the implementation of the Strategy and action plans in their localities, particularly in collecting and providing related information, propaganda, monitoring and protection of environment/resources.

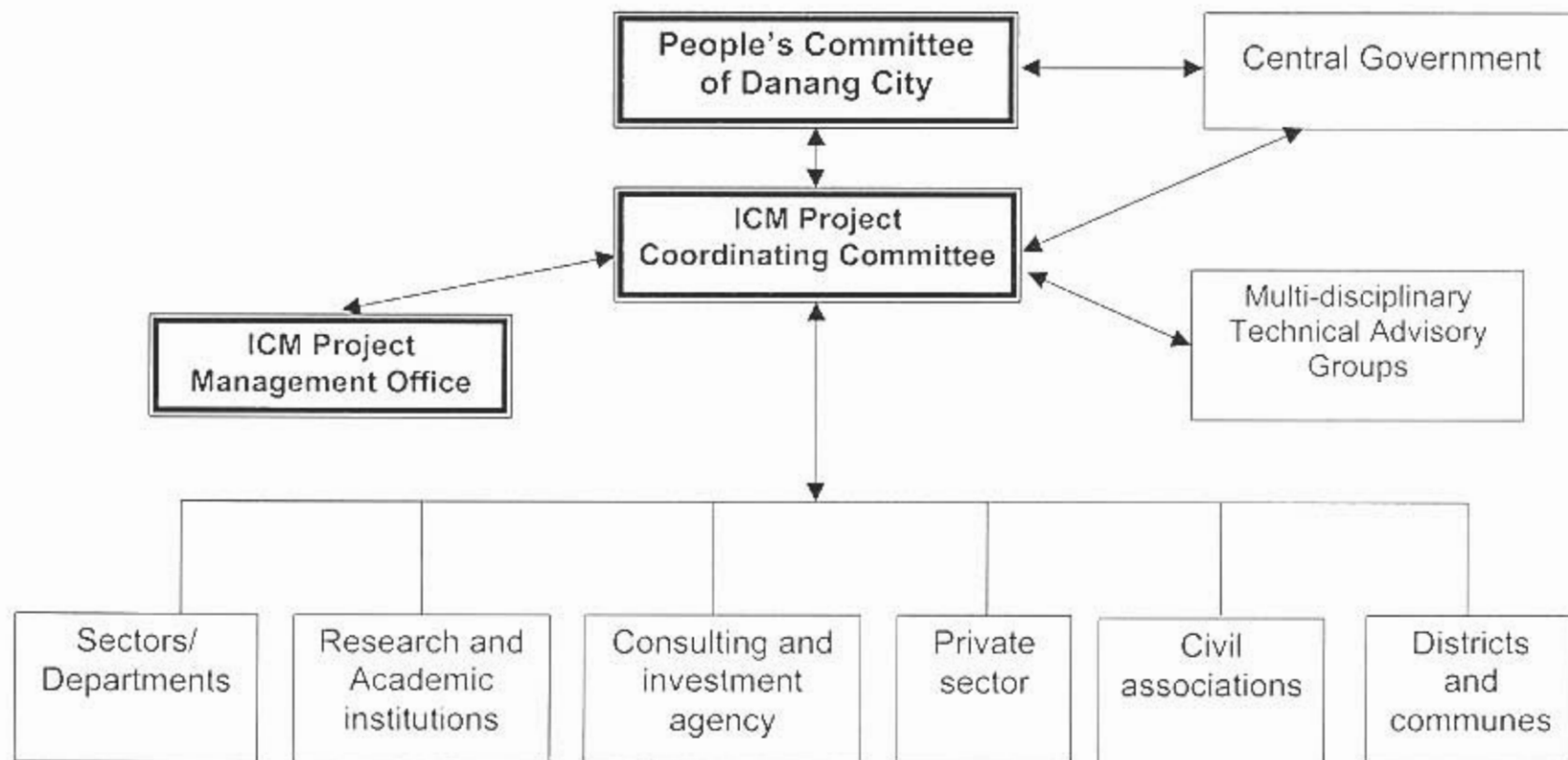


**Furthermore, Danang City needs support from the Central Government, related ministries, sectors, international organizations and sponsors for the implementation of the Strategy:**

**Central Government, related sectors:** Support the implementation of the Strategy through coordination and cooperation activities, training and providing consultation through relevant national agencies and experts; support and approve related proposals of Danang, particularly on institutional/policy improvement.

**International organizations, sponsors:** Support the action programs in compliance with their objectives and benefit; support in the international coordination/cooperation, training and capacity building for the City, transfer new technology, provide equipment, materials, services and budget; encourage and support joint-ventures and private sectors to invest for environment in the Strategy implementation process.

**ORGANIZATIONAL CHART FOR STRATEGY IMPLEMENTATION (2002 - 2005)**



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### 3.6. Monitoring the Strategy

The desired outcomes and changes to be achieved by the vision, strategies and objectives of the Coastal Strategy for Danang City can be classified into three broad categories, namely,

**Institutional activities**, including the individual and collective policy, legal and administrative actions of the City in accordance with the Coastal Strategy.

**Operational activities**, describing the measures taken by stakeholders to halt, mitigate, adapt to, or prevent damage to the environment caused by natural processes and human activities, as defined in the Strategy.

**Environmental state**, referring to the quality of natural resources, and the state of human and ecological health. Indicators in this category reflect the ultimate benefits derived as a consequence of the Coastal Strategy, and are chosen by considering biological, chemical and physical variables and ecological functions.

A series of indicators will be developed to assess progress regarding implementation of the Coastal Strategy of Danang City. The indicators provide a systematic method for each stakeholder group to track its movement toward management arrangements, systems and processes identified in the Strategy. Initiatives of Strategy implementation will involve the stakeholders confirming/agreeing on these indicators, the desired targets or reference values for each indicator and the protocols for assessing them. In the interim, the major institutional and operational indicators may be employed in monitoring the Strategy. Changes and additions will occur to the indicators over time, as monitoring and reporting systems develop and as the capacity of the various stakeholders at the national, local and regional levels increases.

Indicators will be considered according to milestones set for a certain period of time (i.e., one year, two years or five years) in comparison with current status. All indicators and their associated components will be assessed whether they are under development or already in place including their level of achievement.



*For Institutional activities:*

- Establishment and operationalization of interagency multi-sectoral committee.
- Number of legal, economic and financial instruments applied to promoting partnerships.
- Number of environment and natural resources management offices established.
- Development and implementation of Integrated Land-Sea Use Plan.

*For Operational activities:*

- Adoption of multi-sectoral coastal management plans by the City.
- Number of coastal districts/communes with multi-sectoral coastal management plans.
- Number of coastal districts/communes with responsive action plans.
- Number of Multi-sectoral voluntary agreements.
- Number of industries and private enterprises with ISO 14000 certifications.

*For Environmental state:*

- Percent of population with waste treatment facilities.
- Percent of population with access to safe water supply.
- Percent of population with garbage collection and licensed disposal facilities.
- Quality of environmental components such as air, water, soil and biological resources.



## Commitment

*The Government and people of Danang are committed to effectively implement the Coastal Strategy with the aim of achieving a prosperous life by protecting and promoting the values of the coastal and marine environment and their resources.*

## **Appendices**



## Appendix 1: National Demonstration Site on ICM in Danang City

Owing to the success of the ICM projects in Batangas Bay (Philippines) and Xiamen (PR China), the two demonstration sites of the GEF/UNDP/IMO East Asian Seas Project (MPP-EAS), the GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), the second phase of the MPP-EAS, has established six additional ICM demonstration projects at Nampo (People's Democratic Republic of Korea), Chonburi (Thailand), Sihanoukville (Cambodia), Klang (Malaysia), Bali (Indonesia), and Danang (Vietnam).

In Vietnam, the Coastal Strategy has been developed within the framework of the *National Demonstration Site Project on ICM in Danang City* with the support of PEMSEA. Coastal Strategy development is also being undertaken in the other national demonstration and parallel sites. The partnerships and sharing of experiences between these sites are important factors in the development and successful implementation of the ICM project in Danang City.



## Appendix 2: PCC of the National Demonstration Site Project on ICM in Danang City

The People's Committee of Danang established *the Project Coordinating Committee (PCC) of the National Demonstration Site Project on ICM in Danang City* through Decision No. 7997/QĐ-UB on July 5, 2000.

The PCC consists of 25 members representing the different sectors of the city's district governments and important agencies and organizations. The Chairman of the PCC is Mr. Hoang Tuan Anh, Vice-Chairman of the People's Committee of the City.

The PCC is the highest multi-sectoral organization in Danang, which has the following functions:

- ❖ To direct and give advice on project implementation;
- ❖ To review and give advice to the City Government in solving problems/issues on planning, management and rational use of coastal natural resources and environment, and
- ❖ To guide the development and implementation of the Coastal Strategy.



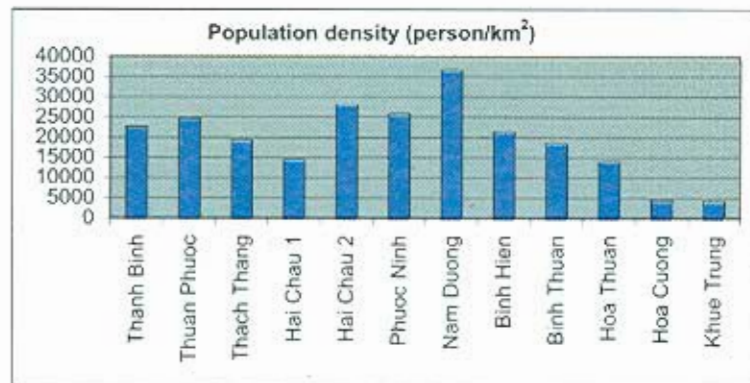
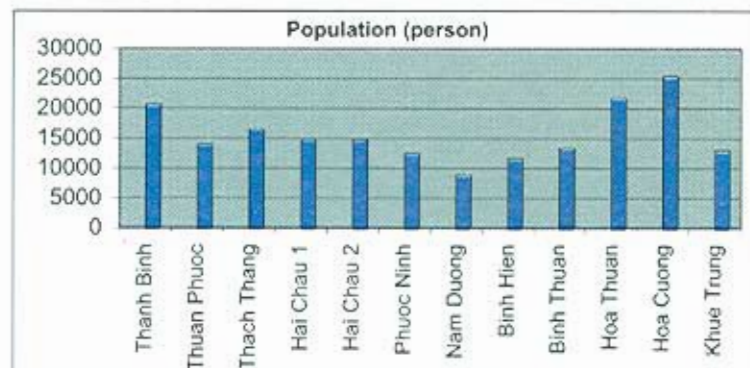
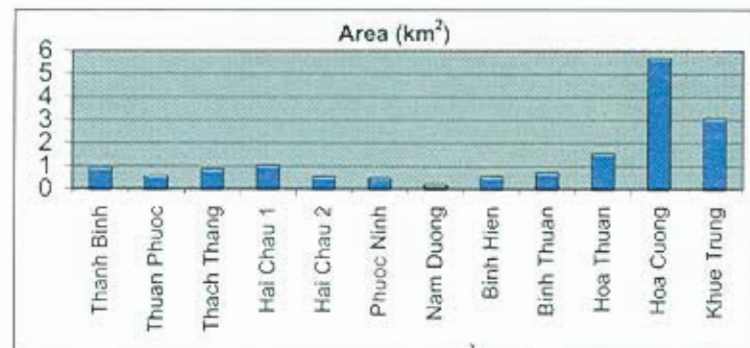
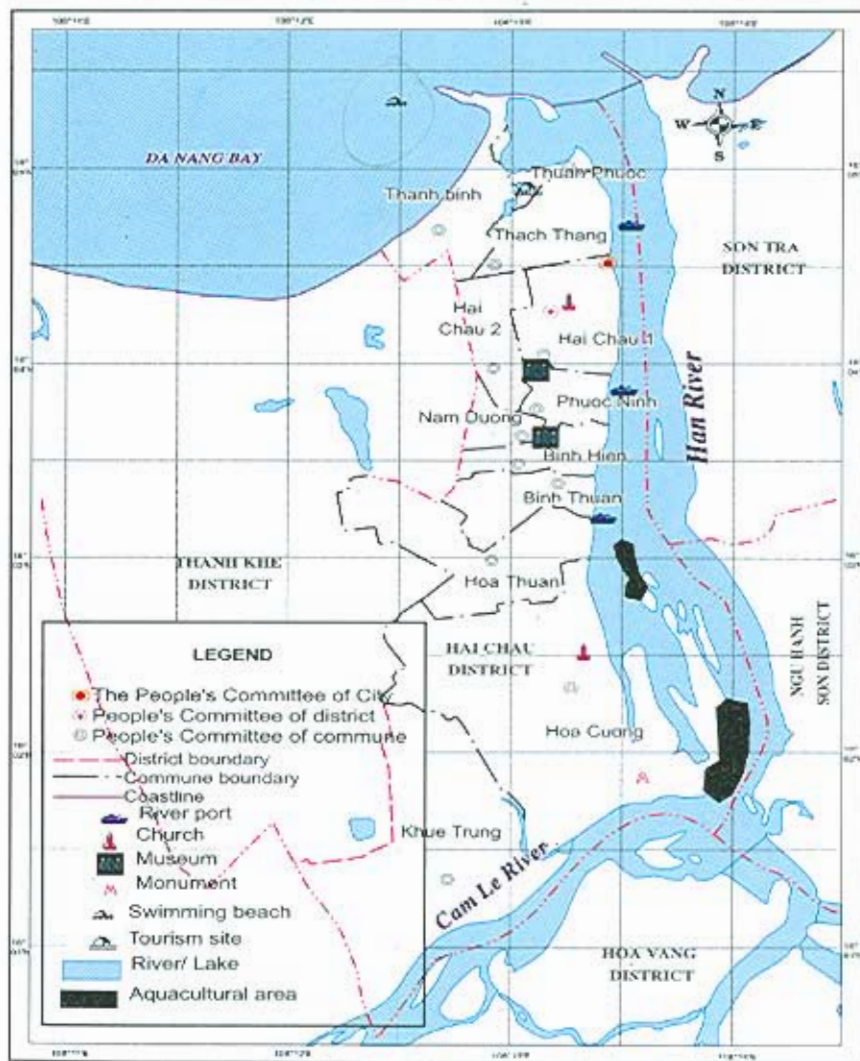
The second PCC meeting at Danang City

## **Appendix 3: Population, area and resources per district**

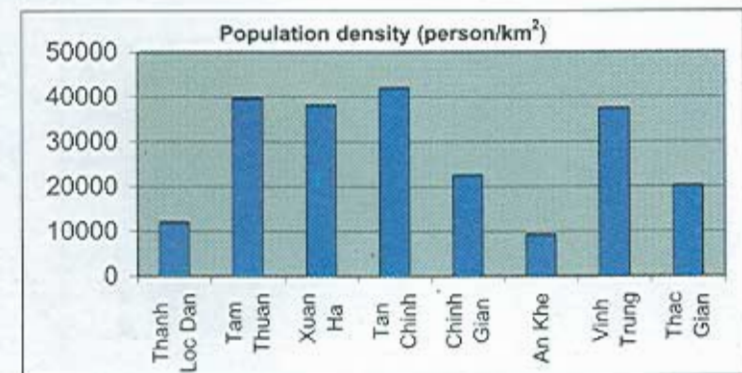
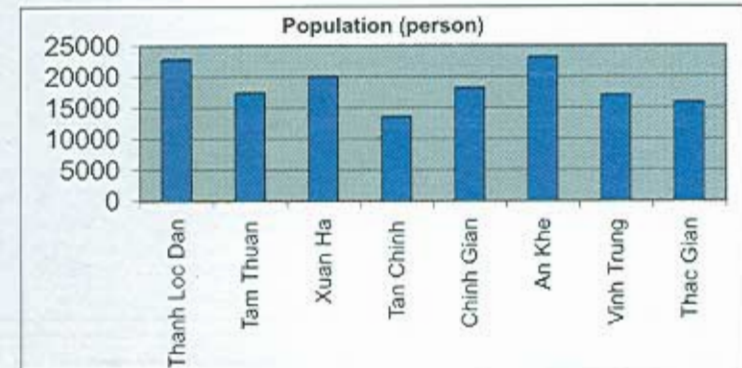
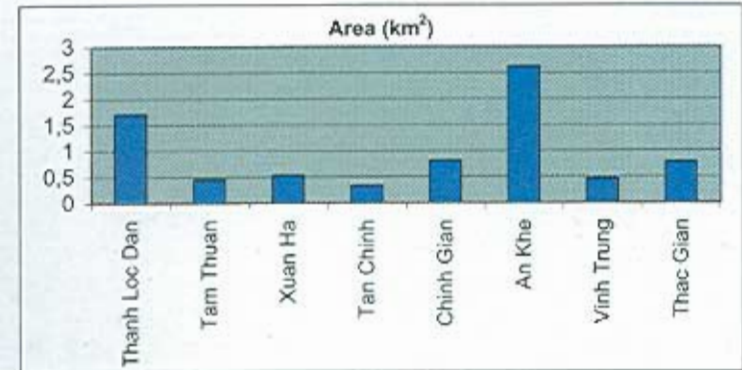
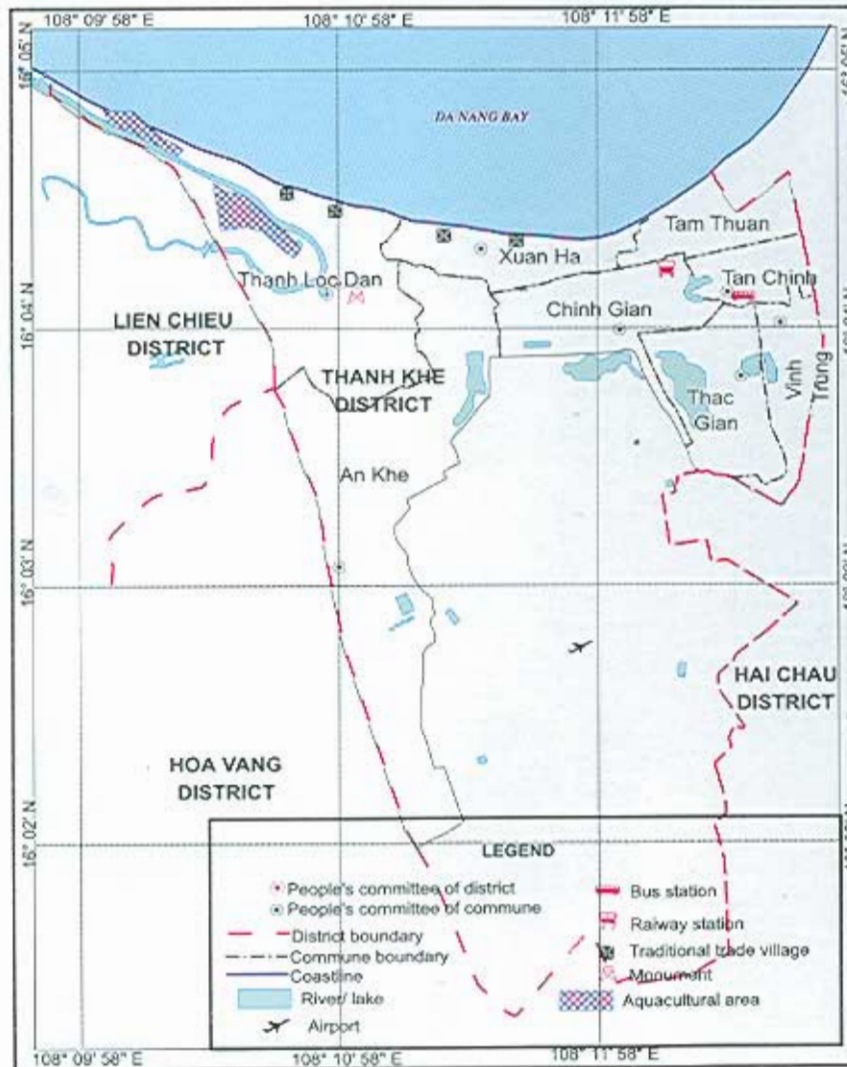
- 1 - Hai Chau District**
- 2 - Thanh Khe District**
- 3 - Son Tra District**
- 4 - Lien Chieu District**
- 5 - Ngu Hanh Son District**
- 6 - Hoa Vang District**



### 1 - Hai Chau District

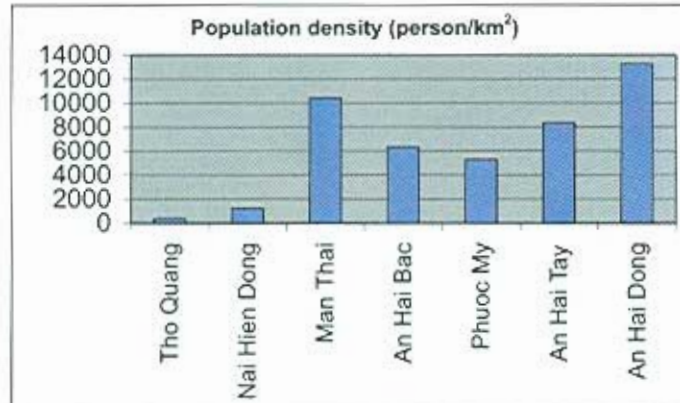
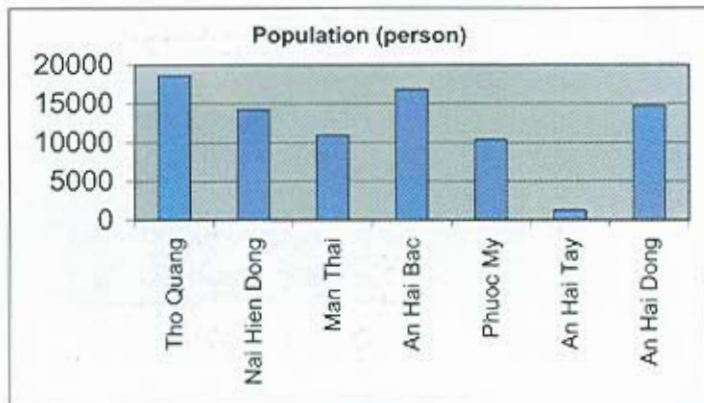
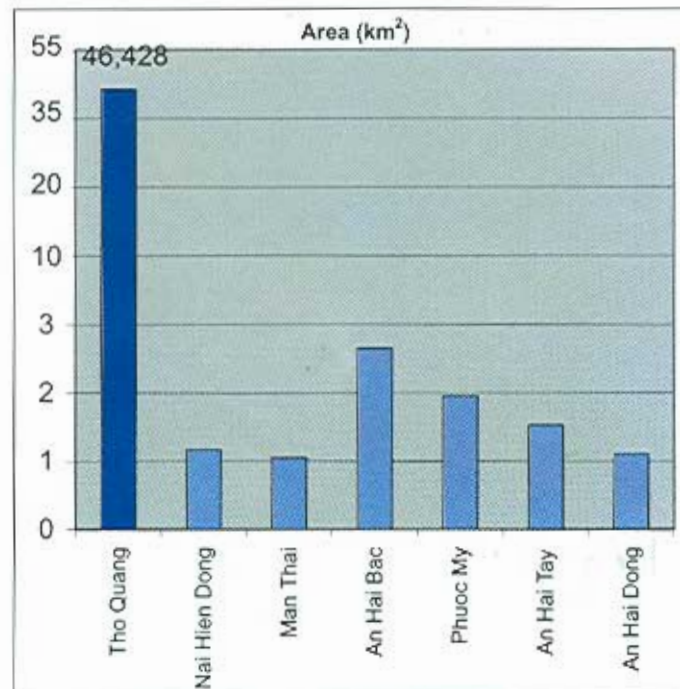
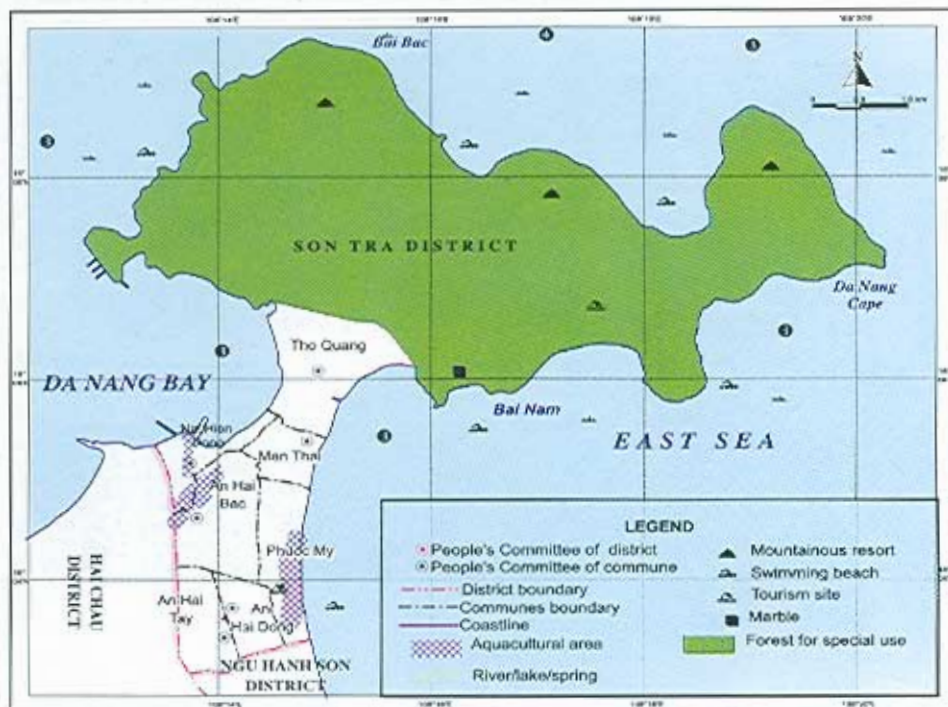


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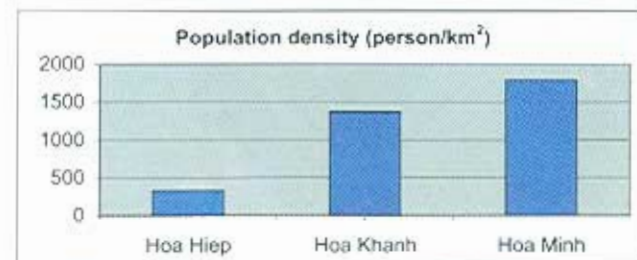
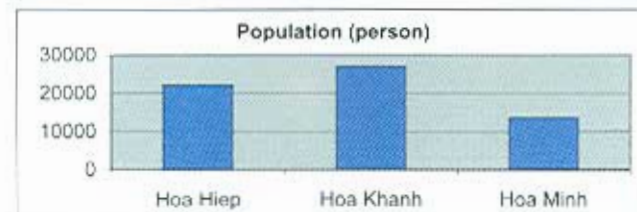
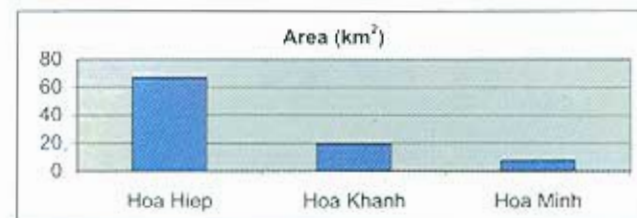
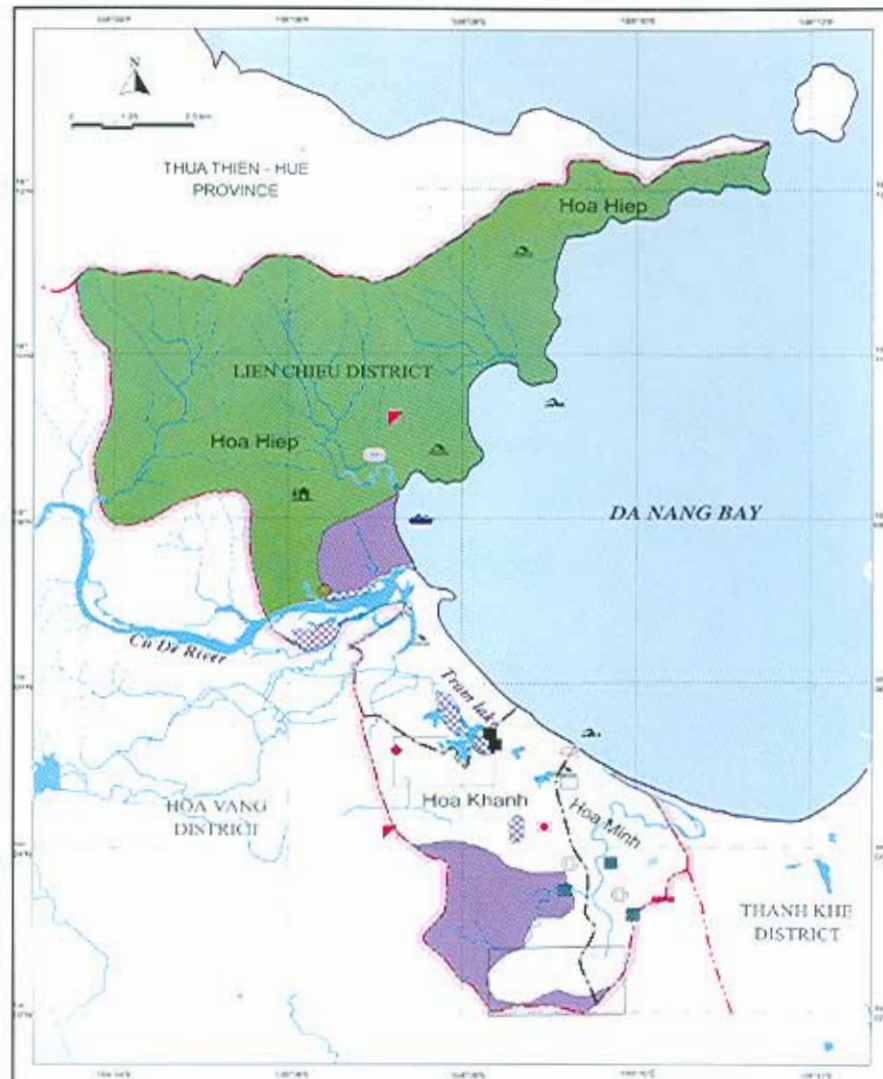


### 3 - Son Tra District

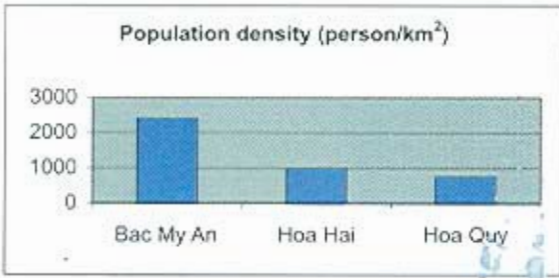
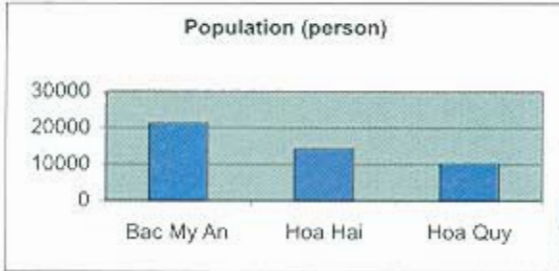
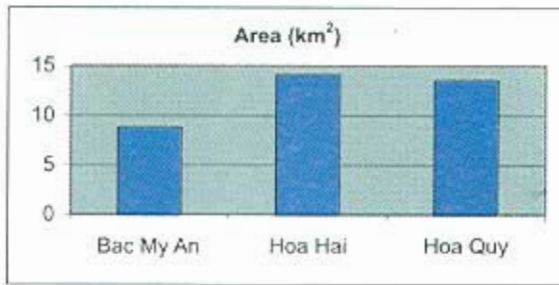
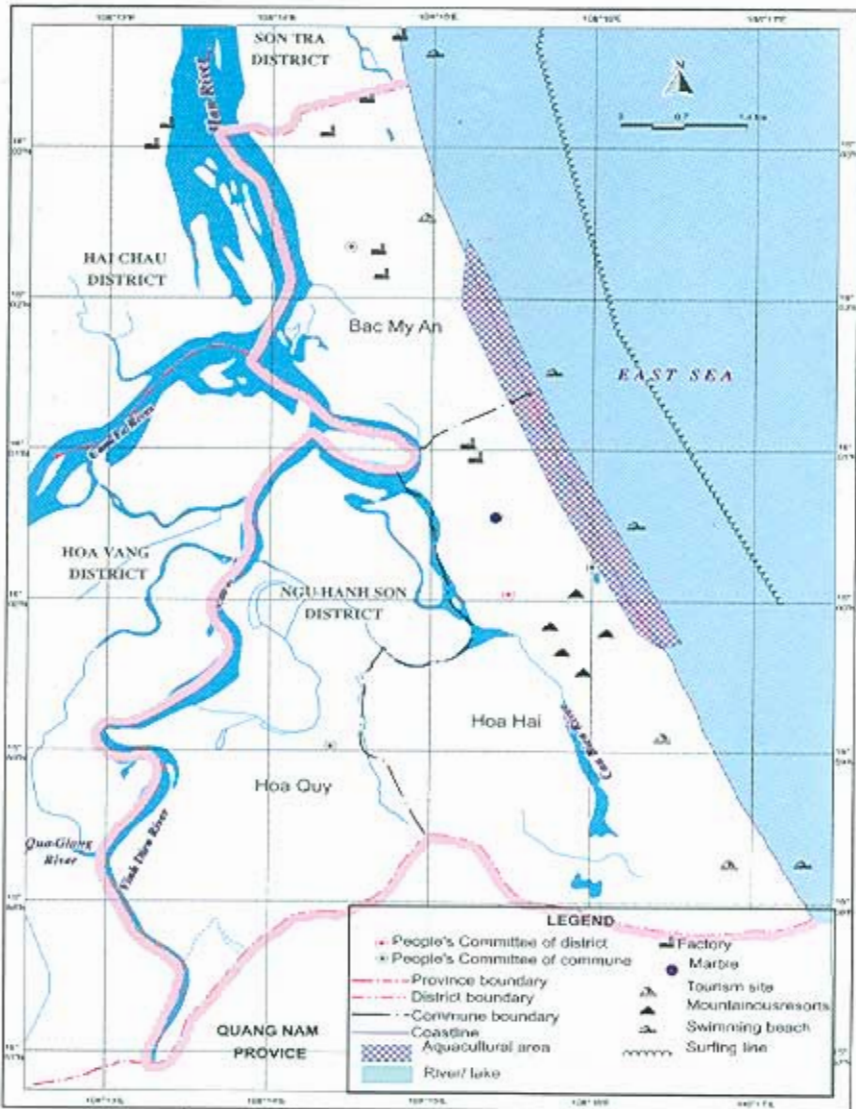




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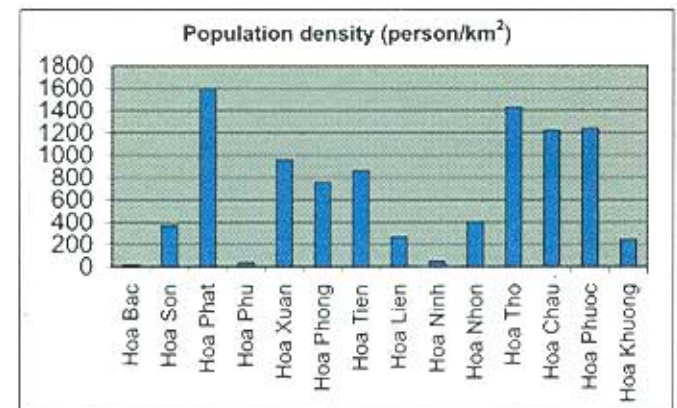
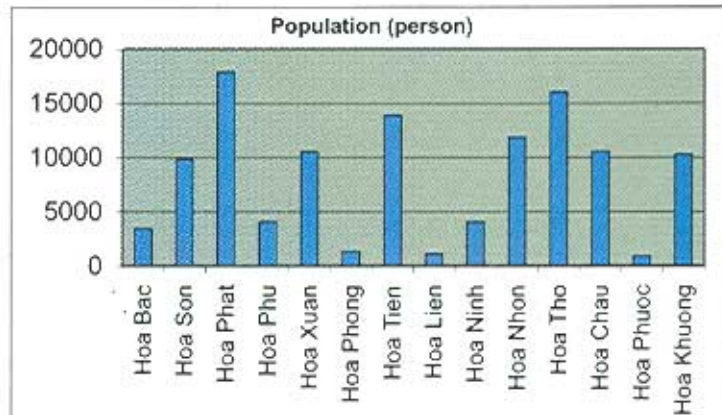
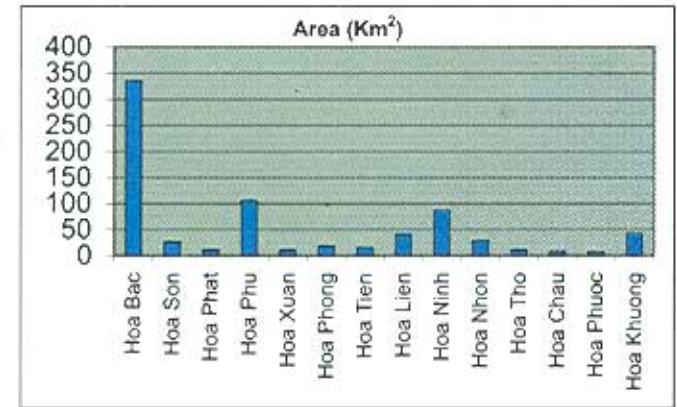
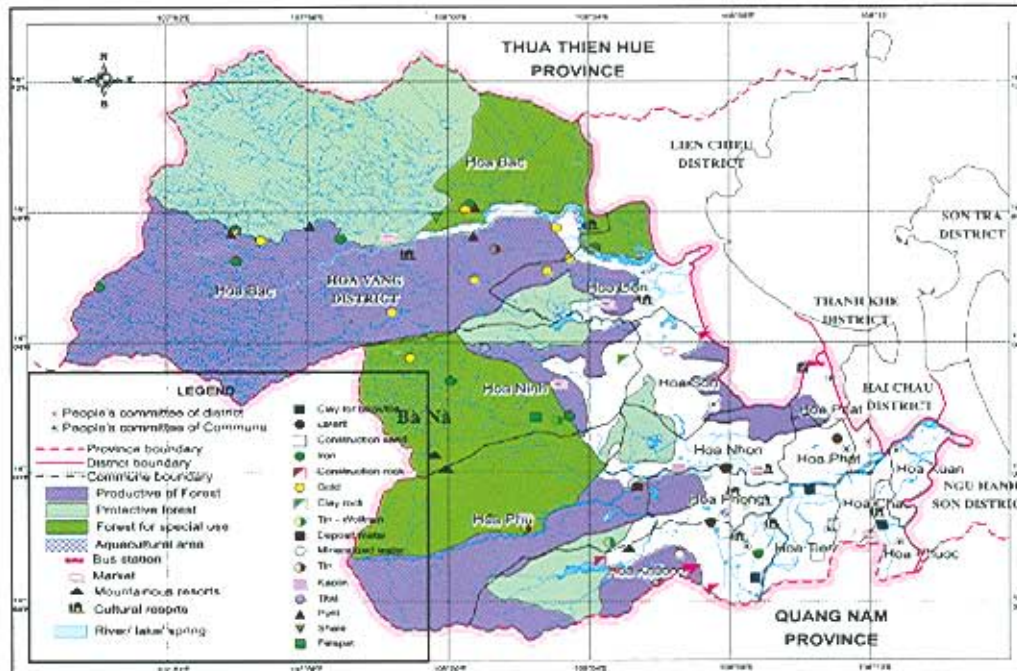


5 - Ngu Hanh Son District





## 6 - Hoa Vang District





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