

The Study on Integrated Development Strategy for Danang City and Its Neighboring Area in the Socialist Republic of Vietnam (DaCRISS)

FINAL REPORT / Annex 7
Project Profiles

December 2010

ALMEC Corporation
International Development Center of Japan

EID

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**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
DANANG PEOPLE'S COMMITTEE**

**THE STUDY ON INTEGRATED DEVELOPMENT STRATEGY
FOR DANANG CITY AND ITS NEIGHBORING AREA
IN THE SOCIALIST REPUBLIC OF VIETNAM
(DACRISS)**

FINAL REPORT

ANNEX 7

PROJECT PROFILES

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**ALMEC CORPORATION
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN**

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ECONOMIC DEVELOPMENT

Ec-2

Subsector		Economic Development	A
Core Strategy		Develop strategic industries	A1
Nature of Project		Proposed by ST	
Title of Project / Program		E-city initiative	
Objectives		<ul style="list-style-type: none"> • Promotion of local software development industry by expanding demand in the public sector • Strengthening of competitiveness of local business by applying IT 	
Outline	Period	2013 - 2015	
	Location	Danang	
	Beneficiaries (target group)	Local software development business	
	Sub Components	<ul style="list-style-type: none"> • E-government Enhancing awareness of IT among top leaders and managers in the government Application of IT in all administrative management in the government • E-commerce Financial support to staff training of IT subjects Improvement of IT related infrastructure 	
	Plan and Layout		
	Operation and Management	Department of Information and Communications	
	Cost (investment, recurrent)	US\$ 3 million (cost of the on-going WB project in Danang)	
	Revenue (if any)		
	Rationale	<ul style="list-style-type: none"> • Demand for software products is still limited in the private sector in Danang city, so the promotion of e-government should effectively stimulate the growth of local software development business. • Application of IT in commercial activities can reduce geographical handicaps of local industry. 	
Implementation	Agency	Department of Information and Communications	
	Planning Requirement	No	
	Funding		
	Resettlement Requirement	No	
	Institutional Arrangement		
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strong commitment by the top leaders to IT promotion 	
Recommendation		<ul style="list-style-type: none"> • 'E-city' initiative should not be focused to a specific enclave of the city (e.g. Software Park) but promoted in all areas. • Sophisticated social infrastructure (e.g. housing, healthcare, education) is needed to attract IT engineers to Danang. 	

Ec-3

Subsector		Economic Development	A
Core Strategy		Develop strategic industries	A1
Nature of Project		Proposed by ST	
Title of Project / Program		Promotion of recycling business	
Objectives		<ul style="list-style-type: none"> • Modernization of domestic recycling industry • Generation of new business 	
Outline	Period	2013 - 2015	
	Location	Danang	
	Beneficiaries (target group)	Local recycling business operators	
	Sub Components	<ul style="list-style-type: none"> • Establishment of a new IZ only for recycling business • Provision of financial incentives for recycling business 	
	Plan and Layout	Specific industrial estate for recycling business	
	Operation and Management	Private IZ management firm	
	Cost (investment, recurrent)	US\$ 0.5 million	
	Revenue (if any)	Fee from tenants in the IZ	
	Rationale	<ul style="list-style-type: none"> • The program is in line with the city's "Environmental city Danang" initiative. • Recycling of industrial waste at modern IZ could become a highly profitable as well as pollution free business. • Small-scale and poorly equipped recycling industry of the country can be modernized. 	
Implementation	Agency	DONRE, DPI, DIEPZA	
	Planning Requirement	EIA	
	Funding	State budget	
	Resettlement Requirement	No	
	Institutional Arrangement	PMU at DPI with members from DONRE and DIEPZA	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Negative perception of recycling business among local residents shall be eliminated. • Appropriate legal framework shall be made to promote local recycling business. • Conditions of the global market for metals or non-metal resources are favorable for recycling business 	
Recommendation		<ul style="list-style-type: none"> • Top leaders and senior officers of the local government should learn from modern recycling industrial parks located in advanced countries. • Public campaign should be enhanced to promote awareness of industrial recycling. 	

Ec-5

Subsector		Economic Development	A
Core Strategy		Promote locations of conventional types of manufacturing industries in coordination with other provinces and reorganization of existing / planning industrial zones	A2
Nature of Project		Proposed by ST	
Title of Project / Program		Promotion of existing industrial zones	
Objectives		• Effective utilization of existing IZs in the city	
Outline	Period	2016 - 2025	
	Location	Danang	
	Beneficiaries (target group)	Local labor force to be employed at existing industrial zones	
	Sub Components	• Introduction of foreign management Utilization of expertise and network of foreign management firms in promoting and managing existing IZs overseas	
	Plan and Layout		
	Operation and Management	DPI, IPC	
	Cost (investment, recurrent)	US\$ 0.5 million	
	Revenue (if any)		
	Rationale	Majority of the successful IZs and EPZs in the country are promoted and managed by foreign firms, including those managing Tan Thuan, VSIP, Thang Long, Amata and Nomura.	
Implementation	Agency	DPI, IPC	
	Planning Requirement	No	
	Funding		
	Resettlement Requirement	No	
	Institutional Arrangement	The DIEPZA should only focus on regulating foreign investments in the zones, instead of managing the zones directly with DAIZICO.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strong commitment of the top leaders • Favorable global business environment 	
Recommendation		<ul style="list-style-type: none"> • Financial and other incentives should be offered to attract experienced foreign management firms of IZs to Danang. 	

Ec-24

Subsector		Economic Development	A
Core Strategy		Promote local SMEs and informal industries	A3
Nature of Project		Proposed by ST	
Title of Project / Program		Private entrepreneurship support	
Objectives		<ul style="list-style-type: none"> • To support local entrepreneurs to improve and expand their small business • To support young entrepreneurs to start their own business 	
Outline	Period	2016 - 2025	
	Location	Danang	
	Beneficiaries (target group)	Local private entrepreneurs	
	Sub Components	<ul style="list-style-type: none"> • Technical support Provision of business development services to those local entrepreneurs who (plan to) manage small business in the city. Expertise of Danang VCCI, which implemented SYB & IYB training until 2004 could be utilized. • Financial support Microfinance service to small business owners • Incubation service Provision of business incubation service for business starters. The pilot business incubation project at DUT could be further developed. 	
	Plan and Layout	No	
	Operation and Management	VCCI, VBSP, DUT and other related institutions	
	Cost (investment, recurrent)	US\$ 0.5 million	
	Revenue (if any)		
	Rationale	Private sector has been one of the driving forces of economic development in the country, but it still remains small and fragile in Danang city. Technical and financial supports should be required to activate local private entrepreneurship. Incubation facilities should be of great demand in the city, where private entrepreneurs find it difficult to find appropriate office or production space.	
Implementation	Agency	VCCI, VBSP, DUT and other related institutions	
	Planning Requirement	A new incubation facility at DUT	
	Funding		
	Resettlement Requirement	No	
	Institutional Arrangement	<ul style="list-style-type: none"> • SME support projects in the city are not well coordinated. The local authority should better establish a new department or a public institution in charge of SME promotion. 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Favorable business environment for private entrepreneurs • Strong commitment of the top leaders 	
Recommendation		<ul style="list-style-type: none"> • 	

Ec-25

Subsector		Economic Development	A
Core Strategy		Promote local SMEs and informal industries	A3
Nature of Project		Proposed by ST	
Title of Project / Program		Establishment of sector based business associations	
Objectives		<ul style="list-style-type: none"> • To enhance dialogue between the government and the private enterprises • To promote coordination and cooperation among private enterprises in the same sector 	
Outline	Period	2016 - 2025	
	Location	Danang	
	Beneficiaries (target group)	Local private entrepreneurs	
	Sub Components	<ul style="list-style-type: none"> • Financial supports Equipments and facilities of newly born sector associations, as well as initial recurrent costs <ul style="list-style-type: none"> • Technical supports Consulting services to the newly born sector associations regarding organizational development, member services, public relations, etc.	
	Plan and Layout	No	
	Operation and Management	VCCI	
	Cost (investment, recurrent)	US\$ 0.5 million	
	Revenue (if any)		
	Rationale	European donors (GTZ and SIDA) supported local business communities to establish sector based business associations in the central provinces, including Quang Nam and Quang Ngai. Their supports were completed, but the local business communities still need support to make their associations active and sustainable.	
Implementation	Agency	VCCI, DPI, DOIT, other related institutions	
	Planning Requirement	No.	
	Funding		
	Resettlement Requirement	No	
	Institutional Arrangement	•	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Favorable business environment for private entrepreneurs • Strong commitment of the top leaders 	
Recommendation		•	

SOCIAL DEVELOPMENT

So-10

Subsector		Social Development	B
Core Strategy		Provide improved basic services and safety net to the citizens	B1
Nature of Project		Proposed by ST	
Title of Project / Program		Development of cultural and sport parks in urban and rural districts	
Objectives		Develop parks with cultural and athletic fields in urban and rural districts	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	<ul style="list-style-type: none"> • Residents of Danang city, at large • Athletes 	
	Sub Components	<ul style="list-style-type: none"> • Make a long-term development plan for purpose-oriented park development • Legalize the long-term development plan as a municipal ordinance to get a legal binding force • Incorporate the long-term development plan into the urban development plan of Danang City (Construction Plan) • Amend necessary municipal ordinance to let Danang Park Corporation to take more decisive responsibility; planning through operation and maintenance. 	
	Plan and Layout	To be determined	
	Operation and Management	Danang Park Corporation	
	Cost (investment, recurrent)	Unknown Funded by local government budget	
	Revenue (if any)	Operation and maintenance costs will be mostly covered by the local government budget. In case indoor swimming pool and/or sports facility is built, there might be revenue from entrance/usage fee, but it must be marginal considering the operation and maintenance costs.	
	Rationale	<p>While there are 247 physical training and sport clubs at the district and commune levels and over thousand clubs for body-building and martial arts run by private sector, Danang city has only one stadium, three gymnastics and two swimming pools for the public at large. Besides public facilities, there are stadiums and swimming pools for military, and facilities at three central sports and physical training schools, which are not accessible for public use, though.</p> <p>With regard to park, the total area of park for recreation and relaxation is about 32ha, and 60% of which is dedicated to only one park, the March 29th park. A park area per capita is about 0.4m² in Danang city. The parks are disproportionally located mostly in Hai Chau district followed by Son Tra and Thanh Khe districts.</p> <p>According to the Park Corporation, the average ratio of park area per capita is 0.45m² in Danang city. When you look by district, Hai Chau is 0.53m²/capita, Thanh Khe is 1.19m²/capita, Son Tra is 0.43m²/capita and the remaining districts, Ngu Hanh Son, Cam Le, Lien Chieu and Hoa Vand do not have a park. [Source: Danang Park Corporation. Because the definition of park area is different, the statistical data for average park are per capita is slightly different]</p> <p>Although there are many public sport clubs and private sports facilities, the city as, a whole, does not have many public spaces for recreation, athletic field and relaxation; even March 29th Park does not have a large enough athletic field for major</p>	

		<p>sports, like football, baseball or tennis.</p> <p>As stated by a representative of senior citizen association and also by the chairperson of women' union, a place for recreation and relaxation is much needed for elderly and young populations. For elderly population, they need a place for daily exercise to maintain fitness and socialize with others, otherwise they tend to stay at home all day long and suffer from geriatric diseases. For young generations, they just need a playground to play sports safely, without concerning much about traffic, as they now play on the street.</p> <p>For cultural facility, Danang city has cultural centers, libraries, museums, exhibition centers, three of each, four cinemas and 11 certified historical relics. Most of them, except libraries, are indoor facilities and not free of charge.</p> <p>Therefore, the development of cultural and sports oriented parks is much needed to improve the living quality of Danang people.</p>
Implementation	Agency	<p>Executing Agency:</p> <p>Department of Construction (DoC)</p> <p>- Danang Park Corporation (currently under DoC)</p> <p>Department of Culture, Sports and Tourism (DoCST)</p>
	Planning Requirement	Legalization of the cultural and sports park development plan in accordance with the master plan of Danang city
	Funding	Local government budget
	Resettlement Requirement	<p>Yes</p> <p>Since open space for greenery and park is limited even at the current planning in urban areas, land acquisition and involuntary resettlement will be most anticipated, while they would not be a significant problem for rural areas.</p>
	Institutional Arrangement	<ul style="list-style-type: none"> • Executing Agency: <ul style="list-style-type: none"> Department of Construction (DoC) - Danang Park Corporation (currently under DoC) Department of Culture, Sports and Tourism (DoCST) • Counterpart body: <ul style="list-style-type: none"> Department of Finance (DoF) Department of Planning and Investment (DPI)
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Cultural and sports park development plan in accordance with the master plan of Danang city is legalized • Necessary budget for land acquisition and resettlement, construction of the park is allocated, according to the plan
Recommendation		<ul style="list-style-type: none"> • Involve various stakeholders, most likely residents, young and elderly people who will use the planned parks in a planning stage of the long-term master plan • Avoid overlap work and plan with "Development of neighborhood park, community park and urban park" project proposed in this master plan.

So-15

Subsector		Social Development	B
Core Strategy		Provide improved basic services and safety net to the citizens	B1
Nature of Project		Proposed by ST	
Title of Project / Program		Develop neighborhood park, community park and urban park	
Objectives		<ul style="list-style-type: none"> • Develop and/or reform existing land-use to expand park (greenery space) to 3-4m² per capita by year 2015, and 6-8m² by year 2020 	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	All residents in Danang City	
	Sub Components	<ul style="list-style-type: none"> • Legislate neighborhood, community and urban park development bylaw in accordance with urban planning law • Physical investment and development for neighborhood, community, urban park and special-purpose park • Land for urban park, planned in DaCRISS master plan will be accordingly allocated and developed 	
	Plan and Layout	<ul style="list-style-type: none"> • Community park at each district except Hai Chau district (minimum 10ha x 5 districts = 50ha) • Neighborhood park at each commune (minimum 3ha x 56 commune = 168ha) • Youth park at Cam Le district (29.6ha) • Tourism – Culture part at Ngu Hanh Son (137.2ha) • Ngu Hanh sculptured statue garden park at Ngu Hanh district (16.7ha) • Botanical and zoological park at Hoa Vang (188ha) • Hai Phong park at Thanh Khe district (1.4ha) • Gym-Sport-Culture park at Hai Chau district (108.2ha) 	
	Operation and Management	Executing Agency: Department of Construction, District O&M: Line agency of district and commune government O&M for urban park: Danang Park Corporation	
	Cost (investment, recurrent)	Unknown (local government budget)	
	Revenue (if any)	None	
	Rationale	<p>The greenery space plays a significant role in environment protection. However, the greenery space in the city center is reducing rapidly due to natural calamity, and urban development. As of 2007, The greenery space of Da Nang city is only 2.2 m² per person (including street tree, park, and office/building trees). If only street tree is calculated the greenery ratio is only 0.63 m² per person.</p> <p>According to the Household Interview Survey (HIS), While only 78.8% of all respondents have access to parks and green space within either a walking or reached distance, more than 80% of people feel that the access of parks and green space is important - thus indicating a supply and demand gap. With a look into the reasons for dissatisfaction, it is noted that inner core areas such as Hai Chau and Thanh Khe, and some fringe areas such as Son Tra and Cam Le tend to have bad access to parks and green space, while people in other areas such as Ngu Hanh Son feel the need for improvement of its facilities.</p> <p>It is indicated in the SEDP Danang City that the city is plan to expand urban greenery (parks, gardens, street trees, campus trees) properly in terms of species and areas. The target of 3-4 m² per capita is expected by year 2015 and 6-8m² by year 2020.</p>	

Implementation	Agency	Line agency of district and commune	
	Planning Requirement	Unknown	
	Funding	Local government budget	
	Resettlement Requirement	Possible	
	Institutional Arrangement	Insignificant at this point	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Regulation is drafted and legislated under DPC, or department ordinance is ratified • Local government will budget significant amount for the development and land reform for park development 	
Recommendation		<ul style="list-style-type: none"> • Detailed land-use plan by each district is illustrated and approved by DPC after DaCRISS Master Plan is completed. 	
Subsector		Social Development	B
Core Strategy		Provide improved basic services and safety net to the citizens	B1
Nature of Project		Proposed by ST ²⁾	
Title of Project / Program		Develop neighborhood park, community park and urban park	
Objectives		<ul style="list-style-type: none"> • Develop and/or reform existing land-use to expand park (greenery space) to 3-4m² per capita by year 2015, and 6-8m² by year 2020. 	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	All residents in Danang City	
	Sub Components	<ul style="list-style-type: none"> • Legislate neighborhood, community and urban park development bylaw in accordance with urban planning law • Physical investment and development for neighborhood, community, urban park and special-purpose park • Land for urban park, planned in DaCRISS master plan will be accordingly allocated and developed 	
	Plan and Layout	<ul style="list-style-type: none"> • Community park at each district except Hai Chau district (minimum 10ha x 5 districts = 50ha) • Neighborhood park at each commune (minimum 3ha x 56 commune = 168ha) • Youth park at Cam Le district (29.6ha) • Tourism – Culture part at Ngu Hanh Son (137.2ha) • Ngu Hanh sculptured statue garden park at Ngu Hanh district (16.7ha) • Botanical and zoological park at Hoa Vang (188ha) • Hai Phong park at Thanh Khe district (1.4ha) • Gym-Sport-Culture park at Hai Chau district (108.2ha) 	
	Operation and Management	Executing Agency: Department of Construction, District O&M: Line agency of district and commune government O&M for urban park: Danang Park Corporation	
	Cost (investment, recurrent)	Unknown (local government budget)	
	Revenue (if any)	None	
	Rationale	<p>The greenery space plays a significant role in environment protection. However, the greenery space in the city center is reducing rapidly due to natural calamity, and urban development. As of 2007, The greenery space of Da Nang city is only 2.2 m² per person (including street tree, park, and office/building trees). If only street tree is calculated the greenery ratio is only 0.63 m² per person.</p> <p>According to the Household Interview Survey (HIS), While only 78.8% of all respondents have access to parks and green space within either a walking or reached distance, more than 80% of people feel that the access of parks and green space is important - thus indicating a supply and demand gap. With a look into the reasons for dissatisfaction, it is noted that inner</p>	

		<p>core areas such as Hai Chau and Thanh Khe, and some fringe areas such as Son Tra and Cam Le tend to have bad access to parks and green space, while people in other areas such as Ngu Hanh Son feel the need for improvement of its facilities.</p> <p>It is indicated in the SEDP Danang City that the city is plan to expand urban greenery (parks, gardens, street trees, campus trees) properly in terms of species and areas. The target of 3-4 m² per capita is expected by year 2015 and 6-8m² by year 2020.</p>
Implementation	Agency	Line agency of district and commune
	Planning Requirement	Unknown
	Funding	Local government budget
	Resettlement Requirement	Possible
	Institutional Arrangement	Insignificant at this point
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Regulation is drafted and legislated under DPC, or department ordinance is ratified • Local government will budget significant amount for the development and land reform for park development
Recommendation		<ul style="list-style-type: none"> • Detailed land-use plan by each district is illustrated and approved by DPC after DaCRISS Master Plan is completed.

So-16

Subsector		Social Development	B
Core Strategy		Provide improved basic services and safety net to the citizens	B1
Nature of Project		Proposed by DC	
Title of Project / Program		Preparation of a development plan for a library network	
Objectives		<ul style="list-style-type: none"> • Study on on-line library network system (portal site, online catalogue search, knowledge bank) • Construction of a central library at the city level, and cultural centers attached with library in each district 	
Outline	Period	2016 - 2025	
	Location	Hai Chau district	
	Beneficiaries (target group)	Residents of Danang city, at large	
	Sub Components	<ul style="list-style-type: none"> • Construction of one city and four district libraries • Plan and provision of network system • Procurement of books and database 	
	Plan and Layout	Unknown	
	Operation and Management	Department of Culture, Sports and Tourism (DoCST) Department of Education and Training (DoET) District governments	
	Cost (investment, recurrent)	<ul style="list-style-type: none"> - Investment 120 billion VND (city library attached with culture center) 40 billion VND (for 4 newly built district libraries) - Recurrent Unknown (procurement of books and database) Funded by local government budget 	
	Revenue (if any)	Operation and maintenance costs will be mostly covered by the local government budget. In case multipurpose hall and/or rooms are built, there might be revenue from usage fees, but it must be marginal compare to the operation and maintenance costs.	
	Rationale	<p>Danang city currently has three libraries, namely Danang library, Learning & Information Resource Center both in Hai Chau district, and Learning Resource Center in Lien Chieu district. There are about 167,000 books and the number of visitors has been double in a past few years from 2,900 to 6,000 visitors in total, and there are many second-hand bookstore and/or privately owned a-kind-of library in the city; which can be interpreted that people would likely to visit a library if it exists nearby their house.</p> <p>Compared to Ho Chi Minh city, Danang city's service delivery in this field is lack of provision of physical facilities. Ho Chi Minh city has one city library and 24 districts have one district library respectively.</p> <p>As stated in SEDP 2020, therefore, it is proposed to build a new city library to accommodate more visitors and equipped with high-end information technology, and at least one district library at each district, giving a priority to the districts which do not have a district library now.</p> <p>Attached to a district library, a culture and information center will be built to provide local information and activities, conduct exhibition and to preserve historical and cultural values through above mentioned activities. The culture and information center can be also serve as a community learning center, where people can attend lifelong study courses,</p> <p>Considering limited land and building capacity of the existing Danang library, it is unlikely to be able to serve as a central</p>	

		library of the Class I city; thus, the library needs to be rebuilt adopting information technology, such as connected on-line to nation-wide and international libraries, hosting portal site as a gate for various kind of research and also corporation with universities and other educational facilities, such as a school for blinds, public and private primary, junior high and high schools.
Implementation	Agency	<ul style="list-style-type: none"> • Department of Culture, Sports and Tourism (DoCST) • Department of Planning and Investment (DPI)
	Planning Requirement	Unknown
	Funding	Local government budget
	Resettlement Requirement	Yes
	Institutional Arrangement	Executing Agency: <ul style="list-style-type: none"> - Department of Culture, Sports and Tourism (DoCST) - Department of Planning and Investment (DPI) Coordination with: <ul style="list-style-type: none"> - Department of Finance - Department of Education
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Cooperation among central, district governments and related educational parties.
Recommendation		<ul style="list-style-type: none"> • Involve various stakeholders, most likely residents, young and elderly people who will use the planned facilities in a planning stage.

So-26

Subsector		Social Development	B
Core Strategy		Provide improved basic services and safety net to the citizens	B1
Nature of Project		Proposed by DC	
Title of Project / Program		Basic education facilities development project	
Objectives		Provide basic education services to students	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	<ul style="list-style-type: none"> • infants and students • citizens, at large 	
	Sub Components	<ul style="list-style-type: none"> • Construction of kindergarten and school buildings 	
	Plan and Layout	In accordance with Danang Education Development Master Plan, by 2020, there should be 150 kindergartens, 150 elementary, 70 secondary and 30 high schools. The ratio of private schools shall be increase to provide diversity in educational system.	
	Operation and Management	<ul style="list-style-type: none"> • Department of Education and Training (DoET) 	
	Cost (investment, recurrent)	Investment 5,485 billion VND (excluding land acquisition and resettlement costs) Recurrent 1.468 billion VND (until 2020)	
	Revenue (if any)	None	
	Rationale	Education facilities, such as kindergarten, primary, secondary, high schools and vocational schools should be built in accordance with the increase of population.	
	Implementation	Agency	Department of Education and Training (DoET)
Planning Requirement		None	
Funding		Local Government	
Resettlement Requirement		Yes	
Institutional Arrangement		Executing Agency: DoET Cooperating Agency: Department of Finance (DoF)	
Critical Factors / Conditions for Success		Unknown	
Recommendation		<ul style="list-style-type: none"> • Involving private sector and community to improve the quality of education and planning 	

So-40

Subsector		Social Development	B
Core Strategy		Provide improved basic services and safety net to the citizens	B3
Nature of Project		Proposed by DC	
Title of Project / Program		Establishment of Disaster Prevention Center and Strengthening of Emergency Response	
Objectives		<ul style="list-style-type: none"> • Built a disaster prevention center, function as research center, knowledge bank and information source on natural disaster for related municipal, district and commune level governmental agencies • Increase public awareness of disaster and capacities of community members for disaster management • Installation of independent disaster information and telecommunication network, which has self-reliant energy source and separated from ordinal telecommunication frequency • Enhance local government's relevant agencies network and institutional capability and capacity in the area of disaster emergency response, in particular "rescue and relief operations" • Empower the capacity of health facilities and personnel for life-saving and disease prevention at district and commune level healthcare centers 	
Outline	Period	2013 - 2015	
	Location	Hoa Minh commune, Thanh Khe district	
	Beneficiaries (target group)	Residents of Danang city, at large Municipal, district and commune level governmental agencies	
	Sub Components	<ul style="list-style-type: none"> • Construction of disaster prevention center • Establishment of GIS center specialized for natural disaster management and make hazard map for each district • Formation emergency plan, including evacuation sites, safe evacuation routes and facilities for emergency goods storage • Installation of independent disaster information and telecommunication network • Capacity building training for public officials regarding disaster emergency response • Capacity building training for medical and healthcare staff regarding disease prevention, and formulation of health disaster management plan • Procurement of helicopter for rescue activity 	
	Plan and Layout	Unknown	
	Operation and Management	Department of Internal Affairs	
	Cost (investment, recurrent)	Unknown	
	Revenue (if any)	None	
	Rationale	<p>Over recent years, natural disaster such as storm, flood and drought have occurred repeatedly, causing landside in riversides, sea coasts, affecting resources. Natural disaster, in particular, storm and flush flood are big and imminent thread to the city. Danang city has some flood-prone areas, and the statistics in 2007 shows that the outbreak of waterborne epidemic diseases after floods was significant, over two thousands cases, and damaged wells were counted more than one million, according to the Department of Health.</p> <p>Damanges from natural disaster can be patially avoided by well design preparedness and high people's awareness to disaster prevention measures. Therefore, not only develop physical</p>	

		infrastructure for disaster management, public awareness is also important to avoid unnecessary confusion and smooth recovery from natural disaster
Implementation	Agency	<ul style="list-style-type: none"> • Danang People's Committee - Department of Internal Affairs
	Planning Requirement	Unknown
	Funding	Local government budget
	Resettlement Requirement	Unknown
	Institutional Arrangement	Executing Agency: <ul style="list-style-type: none"> - Department of Internal Affairs Coordination with: <ul style="list-style-type: none"> - Department of Information and Communications - Department of Health - Department of Natural Resources and Environment
Critical Factors / Conditions for Success		None
Recommendation		None

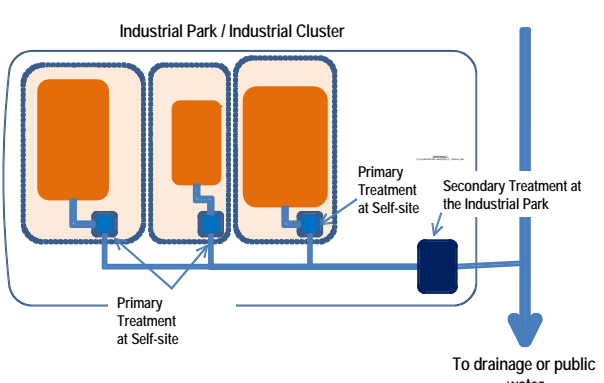
ENVIRONMENTAL MANAGEMENT

So-44

Subsector		Environmental Management	C
Core Strategy		Establish an effective system to remove and prevent from pollutions	C1
Nature of Project		Proposed by DC / Enhanced by ST	
Title of Project / Program		Organization and Promotion of Community-based Disaster Management and Preparedness Activities	
Objectives		<ul style="list-style-type: none"> • To establish a community-driven disaster preventive system and facilitate the preparedness against disasters. • To build an Integrated Disaster Management Plan for Danang City, combining all Community-based Disaster Management (CBDM) Plans. • To promote a participatory movement for self-help community development and upgrading its living environment. 	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	All citizens	
	Sub Components	(1) Disaster management community leaders' training program (2) Organizational setting of Disaster Management Committees at both DPC and District PCs (3) Conduct of a series of Integrated Disaster Management Planning, including delineation of "Hazard Maps" and risk analysis by DONRE (4) Conduct of a series of CBDM programs at District Level	
<p>Plan and Layout :</p> <p>A Proposed Process of the Community-based Disaster Management (CBDM) is shown below. Two (2) streams of activities need to be facilitated: one is Danang City's working stream to formulate an Integrated Disaster Management Plan, covering the entire city jurisdiction; and another is a participatory type of community-driven stream to promote the preparedness against disasters. Both should be integrated, exchanging visions, information/data and know-how.</p> <p>CBDM shall start with training Disaster Management Leaders at community level and then organizing the CBDM committee which is chiefly responsible for this project at both the city level and the district level. The planning unit for CBDM may be "District" at the initial stage, then divided into several sub-districts (or jointed communes) if is necessary, depending on the natural vulnerability.</p> <p>The CBDM movement is popular in Asian countries. The IDEP's program in Indonesia is informative to learn practical CBDM activities. (http://www.idepfoundation.org/index.htm)</p>			
<p>Notes: CBDM = Community-base Disaster Management</p>			

	Operation and Management	To be operated and managed jointly by DONRE and DARD
	Cost (investment, recurrent)	US\$5.0 million for the Phase 1 program (3 years), including all the sub-components, that is, US\$2.0 million for the hazard mapping and risk analysis work; US\$0.5 million, for community leaders training; and US\$2.5 for facilitation of CBDM activities..
	Revenue (if any)	No revenues are expected
	Rationale	Mitigation of fatal damages from disasters is an essential factor to realize the safe and livable city.
Implementation	Agency	DONRE, District PCs, DOT, DARD (Agriculture & Rural Development), DOET (Education and Training)
	Planning Requirement	An well-experienced template for CBDM activities is available through international organizations' technical assistance.
	Funding	To be budgeted by local government (Danang City) for community leaders training and CBDM facilitation (US\$3.0 million); and to be granted by international donor(s) for hazard mapping and risk analysis work through technical assistance (US\$2.0 million).
	Resettlement Requirement	Some resettlements of dwellers who reside in disaster-risky areas might be necessary, based on a disaster management plan to be formulated in the course of this project.
	Institutional Arrangement	Development of new rules and regulations may be required for protection of forests, rivers and other natural resources which protect from the environmental vulnerability.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Existence of a number of capable local leaders is a key to make this project successful. Therefore, provision of training program should be carefully prepared by experienced experts. • Proper initiation of the project is indispensable with technical supports from experienced donors as well as NGOs.
Recommendation		<ul style="list-style-type: none"> • This grass-root type of community- empowerment program is an important element to realize self-sustainable environment management as well as disaster prevention. As many donors must be interested in this program, Danang City is recommended to call for their technical assistance.

En-1


Subsector		Environmental Management	C
Core Strategy		Promote locations of new eco-industries / businesses	C3
Nature of Project		Proposed by DC and Enhanced by ST ¹⁾	
Title of Project / Program		Pollution Free Enhancement Project	
Objectives		<ul style="list-style-type: none"> • To build pollution free industrial estates (KCN) to facilitate a new environment-friendly industrialization policy; • To establish an industrial basis to accommodate new value-added and environment-conscious industries; and • To develop appropriate management system for industrial locations. 	
Outline	Period	2013 - 2015	
	Location	All existing and/or developing industrial estates (KCN), EPZs, or zones in Danang City, namely, Bau Tram, Lien Chieu, Danang Seafood, Hoa Khanh and Hoa Cam.	
	Beneficiaries (target group)	Danang citizens and stakeholders in the industrial sector	
	Sub Components	(1) Development of basic infrastructures for drainage, sewerage, solid waste treatment for currently operating industrial estates so as to meet with the Vietnam Environmental Standards; (2) Development of a hazardous waste management system with physical and institutional mechanisms.	
<p>Plan and Layout</p> <p>The project includes all necessary environmental measures for water, wastewater and air quality, and solid waste management. Major focus will be depending on the characteristics of the target industrial estates. Two commonly important factors should be deliberately designed in consideration of the followings:</p> <p><u>Waste-Water Treatment System:</u> A basic system is as shown in the figure herewith: the primary treatment facility shall be installed within its own premises (no direct discharge from the own premises), and the secondary treatment shall be developed within the property of the industrial estate in compliance with the Environment Law and Standards, and after that, intermediately treated wastewater may be discharged in the domestic system or open water. The most important is the primary treatment where hazardous ingredients shall be strictly screened out. This clear-cut regulation shall be enacted.</p>  <p><u>Hazardous Solid Waste Management System:</u> A legal framework is immediately developed for hazardous waste treatment, addressing: 1) definitions of "hazardous materials" generated from the manufacturing sector; 2) responsibility of the manufacturer for safely treatment of the defined hazardous materials; 3) regulations for the contract-out for industrial solid waste management (clients' responsibilities cannot be avoidable); 4) rules and regulations for collection, intermediate treatment, transportation and final disposal of industrial and hazardous materials.</p>			
Operation and Management		The mechanism of the operation and management shall be included in the project as an important soft component.	
Cost (investment, recurrent)		US\$55 million (including US\$5.0 million for engineering and institutional system studies)	
Revenue (if any)		Service fees shall be collected from beneficiaries to cover the	

		recurrent operation cost at least.
	Rationale	The pollution free industrialization is a must to achieve the Environmental City. In other words, without this project, Danang City cannot be a reputable environment-friendly city.
Implementation	Agency	DOI, DONRE, DOI (Industry), DOST (Science and Technology); DOPI and MBIP&EPZ (Management Board of Industry Parks and Export Processing Zones)
	Planning Requirement	To be conducted jointly by DOI, DONRE and MBIP&EPZ
	Funding	Expected from external funds by Donor(s) as well as DPC's budget for the investment (counterpart budget)
	Resettlement Requirement	Not relevant
	Institutional Arrangement	Review of the current regulations and legal framework will be carefully made, and new arrangements will be argued in the course of the project implementation.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strong will and commitment by DPC for a successful implementation of this project, based on rational recognition of its critical importance. • Application/selection of appropriate engineering technologies suitable for the local reality.
Recommendation		<ul style="list-style-type: none"> • This project is a package program, containing a number of sub-components, including even small-scale projects which are environmentally necessary. This project may also include some of project ideas addressed in the Plan for Danang-Environmental City, based on a holistic view on environment-conscious industrial estate development. • Soft-components such as legal review and HRD shall be included in this package project. • International/bilateral donors are expected to proactively support both the preparatory work (such as a Feasibility Study) and the implementation of this package project as soon as possible.

En-3

Subsector		Environmental Management	C
Core Strategy		Promote locations of new eco-industries / businesses	C3
Nature of Project		Proposed by ST ¹⁾	
Title of Project / Program		Promotion of Compliance with Posting “Certified Pollution Control Manager”	
Objectives		<ul style="list-style-type: none"> • To facilitate pollution free industrialization process, aiming at sustainable economic development in Danang City • To cultivate and promote a social norm that manufacturers be environment-sensitive for their production activities in compliance with the current laws and regulations. • To encourage all the top management in the industrial sector to understand basic functions of the system of “Certified Pollution Control Manager (CPCM)” and employ them as environmental managers. 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	All Danang citizens and people engaged in the industrial sector	
	Sub Components	<ol style="list-style-type: none"> (1) Define eligible industries and/or factories to legally comply with the CPCM system and stipulate their operational conditions; (2) Conduct of a series of seminar/workshops to promote dissemination of the CPCM system, and concept-sharing with “Industrial Associations”, “Chamber of Commerce and Industry” and other stakeholders. (3) Entrench the CPCM system on the recruiting plan of eligible industries. 	
<p>Plan and Layout</p> <p>Application to Industries: The establishment of a CPCM system has been proposed in the categories of C2: Enhance HRD for Knowledge City. This project is to incorporate the CPCM into the manufacturing sector as a legal guideline to direct manufacturing activities with an environmentally adequate management. This is a stream of the right column shown in the figure below.</p> <pre> graph TD subgraph Preparation [Preparation of Qualification Test for CPCM] A[Central Government (MONRE) and Danang City (DONRE)] --> B((Preparatory Committee for CPCM Qualification Test)) C[Technical Involvement of Universities and Research Institutes (NCEST-Danang)] --> B D[Technical Advice from International Donors] --> B end B --> E((The Center for CPCM Association)) subgraph Execution [Execution and Registration] F[Applicants] --> G{Execution of the Test and Evaluation} G -- Yes --> H[Registered CPCM] end E -- Promotion --> I[Industrial Associations Chamber of Commerce and Industries] I --> J[Eligible Companies with Manufacturing Process] J --> K{Recruiting} K -- Yes --> L[Company Staff responsible for Environmental Management] H -- Application --> K </pre> <p>Notes: CPCM= Certified Pollution Control Manager</p>			
Eligible industries:		Eligible industries which have to comply with the CPCM system should be clearly defined by the regulation in detail in terms of: types of manufacturing, size of the operation or production, usage of chemicals and hazardous materials in the process, ingredients of finished products and/or intermediate products; and usage of power and water in the process;	

	generated solid waste and effluents, etc. This should be carefully determined based on a scientific basis.	
	Operation and Management	The Center for CPCM Association (temporarily named) shall be newly established for operation and management of this project.
	Cost (investment, recurrent)	Massive initial investments are not necessary, but US\$ 2.0 million shall be appropriated for the setting –up, and US\$ 0.5 million for the annual recurrent cost.
	Revenue (if any)	Provision of advisory services for environmental management is a source of revenues, but significant amount of revenues cannot be expected.
	Rationale	The institutional system, CPCM, is an effective policy tool to realize the pollution-free industrialization, and the Vietnamese society needs to foster professional environmental managers who have scientific and technological knowledge on environmental protection, and the industrial sector shall accept the system as one of its business promises.
Implementation	Agency	DPC, DONRE, DOI (Industry), DOST, DPI, Danang University
	Planning Requirement	Formulation of an action plan should be made jointly by DONRE and DOI.
	Funding	The Central government as well as Danang City shall appropriate this project as a pioneer model, and international donor(s) should provide technical assistance to effectively implement this project.
	Resettlement Requirement	None
	Institutional Arrangement	The legal basis to justify the CPCM System is a must.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Cooperation with industrial sectors, and a wide variety of business associations • Establishment of a functional CPCM system in collaboration with higher educational and research institutes which are responsible for technical and knowledgeable inputs for the professional certification test.
Recommendation		<ul style="list-style-type: none"> • The introduction of a CPCM system is based on a Japanese successful experience in overcoming the serious industrial pollution problem in 1970s which bore thousands victims on human health. This system functioned well to direct industrial activities towards more environment-oriented manufacturing. The system, of course, should be customized to accord with the local reality in Vietnam. • The CPCM system is not a local policy in nature, but of a national policy. If Danang is only province where the CPCM system is applied, new industries may not be located in Danang, due to its costly factor. However, prior to application over the nation, a pioneer model may be developed in Danang with full scale of national subsidies.

Subsector		Environmental Management	C
Core Strategy		Establish an effective system to remove and prevent from pollutions	C1
Nature of Project		Proposed by ST	
Title of Project / Program		Community Leaders Training Program for Community-driven Environmental Management	
Objectives		<ul style="list-style-type: none"> • To establish a community-driven social development system • To empower community groups to facilitate a self-sustainable environmental management. • To establish a Social Education System to train community leaders for environmental management 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	All citizens	
	Sub Components	(1) Prepare "Training Programs" to foster community leaders for environmental management and disaster management; (2) Organize the Social Education System in collaboration with primary schools, vocational schools and University of Danang; (3) Formulate community-driven projects for living environmental improvement based on shared visions; (4) Implement projects identified appropriate and effective to achieve the visions, being funded by the " Environment Protection Fund " (proposed in Category C5)	
	Plan and Layout	<p>Community-leaders' training programs should be prepared in association with the establishment of a social education system where any citizen can study environmental technologies and knowledge, and be trained for leaders to initiate environmental projects, mobilizing community people.</p> <p>Social Education System may consist of a variety of schooling opportunities in such forms as "Night School", "Community-class" or "Special Lecturers". The elementary school facilities shall be utilized for such a social school.</p> <div style="text-align: center;">  </div>	
Operation and Management	It is an ultimate goal that this project shall be operated and managed by communities themselves.		
Cost (investment, recurrent)	US\$2.0 million for Phase 1 programs (3 years program), including sub-components described above.		
Revenue (if any)	Depending on the community activities to be promoted		
Rationale	Main players to conserve the environment must be community people whose livelihoods are deeply incorporated into the indigenous eco-system. Therefore, it is the best way that community people be empowered to conserve environmental resources.		
Implementation	Agency	DONRE, DOET(Education and Training), DARD and District PCs	
	Planning Requirement	Thoughtful training programs should be prepared by DONRE, DOET and District PCs with close cooperation of DOET and the University of Danang.	

	Funding	To be budgeted by Danang City with a technical assistance from donor(s).
	Resettlement Requirement	Not relevant
	Institutional Arrangement	Some institutional basis for "Social Education System" should be established, if is necessary.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Although no visible outcomes from this project are expected, this project is very significant for a bottom-up of the social power. This recognition should be shared among all relevant authorities. • Proactive cooperation from DOET is a key factor for success to organize the social education system in parallel with the compulsory education system.
Recommendation		<ul style="list-style-type: none"> • A number of models for Social Education System are available both in developing and developed countries. Referring to those models, good practical training materials need to be prepared with technical assistance from donor(s) and/or experienced NGOs.

En-18

Subsector		Environmental Management	C
Core Strategy		Enhance social awareness and knowledge on environmental issues	C4
Nature of Project		Proposed by ST	
Title of Project / Program		Establishment of Comprehensive Monitoring System for Major Environmental Factors	
Objectives		<ul style="list-style-type: none"> • To establish a city-wide environmental monitoring system which is directly linked with the assessment capacities; • To build an environment database; • To develop human resource capacity for environmental management at Danang City 	
Outline	Period	2013 - 2015	
	Location	Danang City and its neighboring provinces	
	Beneficiaries (target group)	Citizens of Danang City	
	Sub Components	<ol style="list-style-type: none"> (1) Study and design the Comprehensive Environmental Monitoring System (CEMS); (2) Construct the monitoring stations and installation of machine/equipment; (3) Strengthen the laboratory capacity of DONRE and Danag University of Technology; and (4) Develop a data-networking system for assessment and pursuance of proper measures/actions to be taken 	
	Plan and Layout	<p>The figure below presents an image of the comprehensive monitoring system which is proposed for Danang City.</p>	
Operation and Management	To be done by DONRE		
Cost (investment, recurrent)	US\$15.0 million for the initial stage to materialize the four sub-components mentioned above, and US\$ 2.0 million for annual recurrent cost to operate the system		
Revenue (if any)	No revenues are expected		
Rationale	<p>There are three rationales as follows:</p> <ol style="list-style-type: none"> (1) At present, there are 4 monitoring stations to measure the water quality at the Danang Bay – the one lies on Phu Loc 		

		<p>estuary and the other 3 stations near Cu De estuary, 500m, 1000, 1000m far from the estuary respectively. However, a modernized systematic environmental monitoring system for water quality, ambient air quality, noise levels and other environmental elements have not been developed yet.</p> <p>(2) The quantitative levels of the environmental quality cannot be identified. Therefore, the achievement level of the numerical targets addressed in the Plan of the Environmental City cannot be examined.</p> <p>(3) The reliable monitoring system is a must to strengthen the environmental management capacity at the government level.</p>
Implementation	Agency	DONRE, DOST, District PCs and Danang University of Technology
	Planning Requirement	The action plan should be prepared by DONRE
	Funding	Danang City is requested to budget 50% of the initial investment costs and recurrent cost for the operation. The remaining 50% of the initial cost is expected to be funded by donor(s) programs.
	Resettlement Requirement	Not relevant
	Institutional Arrangement	To be managed in compliance with the current laws, regulations, and/or guidelines.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • DONRE's coherent policy • Close cooperation with Danang University of Technology in terms of environmental evaluation and laboratory functions.
Recommendation		<ul style="list-style-type: none"> • This project is essential to strengthen the environmental management capacity of DONRE, in terms of environmental measurements, evaluation of monitored data, identification of most appropriate solutions and building a useful database with which a time-series analysis can be made. • An ICT-based environmental monitoring system linked with satellite information is recommended to be introduced.

Subsector		Environmental Management	C
Core Strategy		Enhance social awareness and knowledge on environmental issues	C4
Nature of Project		Proposed by ST	
Title of Project / Program		Development/Enhancement of National Center for Environmental Science and Technology (NCEST-Danang)	
Objectives		<ul style="list-style-type: none"> To establish an advanced research basis for environmental science and technologies in Vietnam; To build a platform for environment-related research collaboration with international institutes; To create a symbolic knowledge core for “the Environmental City-Danang” 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	All Vietnamese people as well as Danang Citizens but	
	Sub Components	<ol style="list-style-type: none"> Organize the preparatory committee for establishment of the NCEST-Danang jointly with the National and City Governments, Construct or renovate the existing building for the NCEST building and procure necessary equipment and facilities Post staffs and functionalize the NCEST. 	
Plan and Layout			
<p>The NCEST-Danang is proposed to be established as one of national research centers specialized in environmental subjects, attached to the Danang University of Technology. The existing center, named “<i>Environment Protection Research Center (EPRC)</i>”, shall be enhanced as a core of the new organization.</p> <p>The NCEST-Danang shall be a reputable national center where outstanding domestic and international researchers gather for environmental science and technologies. Four (4) functions are expected to be developed as shown in the figure, i.e., 1) research; 2) education and training; 3) consultancy services; and 4) laboratory. The consultancy services are provided to support strategies and projects to be formulated for the policy of “the Environmental City-Danang.”</p>			
		<pre> graph TD NCEST((NCEST-Danang)) --- Research((Research)) NCEST --- Education((Education & Training)) NCEST --- Consultancy((Consultancy Services)) NCEST --- Laboratory((Laboratory)) Research --- R1[International Collaboration for New Environmental Technology] Research --- R2[Innovation of Energy-saving] Education --- E1[For University Students] Education --- E2[For Professionals from the Industrial Sector] Consultancy --- C1[Environmental Management] Consultancy --- C2[CDM projects] Consultancy --- C3[Environmental Assessment] Laboratory --- L1[Monitoring and Analysis] Laboratory --- L2[Individual Monitoring] </pre>	
Operation and Management		To be sustainably operated and managed by the Center itself.	
Cost (investment, recurrent)		US\$20~25 million for the initial investment costs including the building and procurements of basic equipment and facilities. The recurrent cost will be more or less US\$2.5 million, given a total of 50 staffs.	
Revenue (if any)		It may be possible that major part (more than 50%) of the recurrent costs be covered with incomes from contracted research and consultancy services.	
Rationale		An advanced academic and research platform to exchange environment-related knowledge and technologies must be indispensable for Vietnam in the future.	
Implementation	Agency	National Level: The University of Danang, MOET, MOST; DPC level: DOET, DOST, DONRE	
	Planning Requirement	An action plan needs to be thoughtfully made, referring to	

		advanced models in developed countries.
	Funding	50% of the initial investment by the central government and the remaining 50% may be granted by donor(s), international organization and private companies through CSR (Corporate Social Responsibility).
	Resettlement Requirement	Not relevant
	Institutional Arrangement	Some institutional arrangement related to Laws of National Universities may be needed.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Vision-sharing with top leaders of the national and local government as well as the University of Danang, and their strong supports • Donors' proactive cooperation to this project • Formulation of an environment research network with reputable universities and institutes in Asian Region in particular.
Recommendation		<ul style="list-style-type: none"> • The human resource of Danang is only competitive against Hanoi and Ho Chi Minh. This project aims to create such a symbolic knowledge center, representing the policy of "the Environmental City-Danang." It is a vivid vision in near future that all those who are interested in environment-related research and technologies are coming to Danang anyhow. • Many research institutes will be available to build a tie-up with NCEST-Danang. As for CDM projects, private companies look for Vietnamese partners. So, based on this project, Vietnam shall commence the preparation to get into the next generation of the industrialization process.


Subsector		Environmental Management	C
Core Strategy		Promote locations of new eco-industries / businesses	C3
Nature of Project		Proposed by DC , and Enhanced by ST ¹⁾	
Title of Project / Program		Encouragement of CDM Projects for Commitment to Global Issues	
Objectives		<ul style="list-style-type: none"> • To commit Danang City's affirmative position to "global environmental issues" through supporting projects relevant to CDM (Clean Development Mechanism); • To facilitate environmental policies with a long-term vision on "Low Carbon Society". 	
Outline	Period	2013 - 2015	
	Location	Danang City and its neighboring provinces	
	Beneficiaries (target group)	All Danang citizens and their next generation	
	Sub Components	<ul style="list-style-type: none"> • Encouragement of replacement of aging and/or decrepit electric power generation plants not only at national and provincial levels, but also at private factories; • Promotion of usage of public transportation and energy-saving living-styles; • Introduction and/or invention of renewable energy systems such as solar, wind and tidal current; • Facilitation of "3R movements" and introduction of waste-to-energy plant(s) at final disposal site(s), based on a careful feasibility study 	
<p>Plan and Layout:</p> <p>Concepts of CMD: Energy-saving and change of energy sources are important strategies for reduction of ambient air pollution as well as global warming. Vietnam has ratified the Kyoto Protocol (2002). The CDM projects are beneficial to Danang citizen, once the project is given approval credits for CER (certified emission reduction), which may help the project feasibility on a monetary basis.</p> <p>Candidates: There are many opportunities for CDM projects in addition to sub-components as described above. Nowadays, many developed countries seek for good collaboration for implementation of CDM projects with Vietnam partners. The private sector's activities are in a main stream, but the government sector needs to provide an supportive environment for such investments.</p>			
Operation and Management		This policy shall be pushed chiefly by DONRE, and supported by relevant departments such as DOTPW and DOST. In order to invite more foreign direct investment (FDI), DPI is expected to provide some special incentives on CDM projects.	
Cost (investment, recurrent)		Depending on projects, but no massive public investments are usually required except for energy sector projects.	
Revenue (if any)		Credits of CER are salable at the International Carbon Market.	
Rationale		Vietnam is one of the global members, and the commitment to global issues will bear no economic burdens, but bring some	

		economic benefits to the Vietnamese society on the long run.
Implementation	Agency	DONRE, DOTPW, DOST (Science & Technology); DPI (Planning and Investment), University of Danang
	Planning Requirement	A further concrete CDM promotion policy needs to be depicted as its policy guidelines, mentioning the governmental supports.
	Funding	To be funded by project proponents
	Resettlement Requirement	Not relevant
	Institutional Arrangement	CDM projects should be conducted in compliance with the current legal framework.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Public awareness of “global issues” needs to be widely promoted to invite people's interests in and attentions to CDM projects. • Government officials' knowledge level on CDM needs to be uplifted.
Recommendation		<ul style="list-style-type: none"> • DONRE is expected to establish a CDM desk which is the first contact of those who are interested in launching a CDM project, providing information of candidate projects & partners, government policy guidelines, and other relevant data. The CDM desk shall also be a sales office linked with international activities. • It is recommended to dispatch several government officials concerned to get training courses about CDM and current world agenda on global issues in developed countries.

Subsector		Environmental Management	C
Core Strategy		Enhance social awareness and knowledge on environmental issues	C4
Nature of Project		Proposed by DC ¹⁾	
Title of Project / Program		Development of an Official Qualification System for Certified Pollution Control Managers (CPCM)	
Objectives		<p>This project is part of the entire system, combined with a proposed project in Strategy C3: “Promotion of Compliance with Posting “Certified Pollution Control Manager””, having the common objectives as:</p> <ul style="list-style-type: none"> • To facilitate pollution free industrialization process, aiming at sustainable economic development in Danang City • To cultivate and promote a social norm that manufacturers be environment-sensitive for their production activities in compliance with the current laws and regulations. • To encourage all the top management in the industrial sector to understand basic functions of the system of “Certified Pollution Control Manager (CPCM)” and employ them as environmental managers. 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	All Danang citizens and people engaged in the industrial sector	
	Sub Components	(1) Develop an institutional mechanism for the CPCM system (2) Establish a qualification testing system for CPCM (3) Organize an entity to perform the operation and management of the CPCM system, including the official registration of CPCM.	
<p>Plan and Layout</p> <p>This project is to establish the CPCM system and conduct preparatory activities to make the CPCM workable. Main activities in this project are twofold, i.e., those encompassed with the dotted line in the structural chart below, “ 1) Preparation of Qualification Test” and “ 2) Execution and Registration of CPCM”.</p> <p>Notes: CPCM= Certified Pollution Control Manager</p>			
<p>1) Preparation of Qualification Test:</p> <p>The Preparatory Committee for CPCM Qualification Test shall be organized with some selected professional personnel. This committee’s tasks are to design a total mechanism for</p>			

	<p>the testing, to define a required knowledge level for CPCMs, referring to its social responsibility, and to prepare questions. These tasks shall be supported by the University of Danang (or a proposed National Center for Environmental Technology and Science-NCETS) in terms of intellectual and technical inputs.</p> <p>2) Execution and Registration of CPCMs</p> <p>An organization should be established as the responsible entity to perform the operation and management of the entire CPCM system, temporarily named “the Center for CPCMs Association”, mandated with the following tasks:</p> <ul style="list-style-type: none"> • Promotion of Public Relations (PR) for the CPCM system; • Provision of liaison services for the Preparatory Committee CPCM Qualification Test; • Execution of the qualification test and evaluation; • Official registration of CPCMs and issuance of the certificate; • Mediation for recruiting CPCMs; and • Other relevant activities. 								
	<table border="1"> <tr> <td>Operation and Management</td> <td>To be operated and managed by the Center for CPCMs Association to be newly organized at the initial stage.</td> </tr> <tr> <td>Cost (investment, recurrent)</td> <td>US\$ 2.0 million for the initial activities; and US\$ 0.5–0.8 million for annual recurrent cost for the operation.</td> </tr> <tr> <td>Revenue (if any)</td> <td>Partially covered with revenues from examination fees.</td> </tr> <tr> <td>Rationale</td> <td>This institutional system, CPCM, is an effective policy tool to realize the pollution-free industrialization, and the Vietnamese society needs to foster professional environmental managers who have scientific and technological knowledge on environmental protection, and the industrial sector shall accept the system as one of its business promises.</td> </tr> </table>	Operation and Management	To be operated and managed by the Center for CPCMs Association to be newly organized at the initial stage.	Cost (investment, recurrent)	US\$ 2.0 million for the initial activities; and US\$ 0.5–0.8 million for annual recurrent cost for the operation.	Revenue (if any)	Partially covered with revenues from examination fees.	Rationale	This institutional system, CPCM, is an effective policy tool to realize the pollution-free industrialization, and the Vietnamese society needs to foster professional environmental managers who have scientific and technological knowledge on environmental protection, and the industrial sector shall accept the system as one of its business promises.
Operation and Management	To be operated and managed by the Center for CPCMs Association to be newly organized at the initial stage.								
Cost (investment, recurrent)	US\$ 2.0 million for the initial activities; and US\$ 0.5–0.8 million for annual recurrent cost for the operation.								
Revenue (if any)	Partially covered with revenues from examination fees.								
Rationale	This institutional system, CPCM, is an effective policy tool to realize the pollution-free industrialization, and the Vietnamese society needs to foster professional environmental managers who have scientific and technological knowledge on environmental protection, and the industrial sector shall accept the system as one of its business promises.								
Implementation	Agency	DONRE, DOST (Science & Technology), DPI, DOIT (Industry and Trade) and The University of Danang							
	Planning Requirement	The entire institutional system shall be thoughtfully designed jointly with DONRE, DOIT, DOST and UD.							
	Funding	To be budgeted by Danang City with subsidies from the Central Government.							
	Resettlement Requirement	Not relevant							
	Institutional Arrangement	The CPCM system should be institutionalized with a legal framework, which may be of a national legislation.							
Critical Factors / Conditions for Success	<ul style="list-style-type: none"> • Proactive initiatives by both the central and city governments • Cooperation with industrial sectors, and a wide variety of business associations • Establishment of a functional CPCM system in collaboration with higher educational and research institutes 								
Recommendation	<ul style="list-style-type: none"> • The introduction of a CPCM system is based on a Japanese successful experience in overcoming the serious industrial pollution problem in 1970s which bore thousands victims on human health. This system functioned well to direct industrial activities towards more environment-oriented manufacturing. The system, of course, should be customized to accord with the local reality in Vietnam. • The CPCM system is not a local policy in nature, but of a national policy. This institutional development, as a pioneer model, should be developed in Danang with full support of the central government. 								

En-31

Subsector		Environmental Management	C
Core Strategy		Develop institutional and organizational systems to manage environment sustainability	C5
Nature of Project		Proposed by DC , and Enhanced by ST ¹⁾	
Title of Project / Program		Establishment of a “District Environmental Protection Fund” System	
Objectives		<ul style="list-style-type: none"> •To establish a collective financing system for community-driven environmental projects/programs; •To keep a sustainability for various community-based activities to improve the living and sanitary conditions at communes; •To provide a financial support to community organizations to facilitate adequate operation and management of the developed infrastructures. 	
Outline	Period	2013 - 2015	
	Location	Over the Jurisdiction of Danang City	
	Beneficiaries (target group)	All citizens, or community people in Danang City	
	Sub Components	<ol style="list-style-type: none"> (1) System design and legal approval of the District Environmental Protection Fund (EPF), by Danang City; (2) Organizational setting of the operation scheme of District Environmental Protection Fund at selected model districts, including fund collection activities; (3) Promotion of Public Relations to the general public (4) Encouragement of actual funding operation for activities to be supported. (5) Performance monitoring of the fund operation and management. 	
	<p>Plan and Layout: Conceptual Scheme of Environmental Protection Fund</p>  <p>The diagram illustrates the flow of funds and management within the Environmental Protection Fund (EPF). It is divided into two main phases: Fund Raising and Fund Management. In the Fund Raising phase, sources include Users of Environmental Resources, Business Sector through CSRs, Local Government, NGOs and Individuals, and International Donors. These sources contribute to the Environmental Protection Fund (EPF). The EPF is supported by Legal Setting and Legal Justification and Support. In the Fund Management phase, the EPF is managed by the EPF Management Board, which includes Representatives and EPF Auditor(s). The EPF Management Board oversees the EPF Operation Office, which in turn supports three types of Community-based Activities (A, B, and C). The EPF Operation Office also handles Repayment. A red box at the bottom indicates 'Legal Justification and Guidelines for Operation and Accounting'.</p>		
Operation and Management	The EPF Management Board in association with the EPF Auditor shall be organized to assure a justifiable operation and management mechanism.		
Cost (investment, recurrent)	The initial amount of each district fund is expected to be US\$ 2 to 5 million, depending on its environmental conditions. The fund shall be sustainable by introducing a revolving system, however, it shall be periodically replenished to fulfill the unavoidable liquidation.		
Revenue (if any)	A profitable operation may be possible, although it is based on zero revenue operation.		
Rationale	Community's initiatives for environmental protection and/or environment improvement will be enhanced through this		

		financial tool.
Implementation	Agency	DPC, DONRE, DPI, DOF
	Planning Requirement	Thoughtful design of the entire mechanism is required to be made by professionals, based on learning of other cities' experiences.
	Funding	Danang City Government, CSRs (Corporate Social Responsibilities) by the Business Sector, NGOs' contributions, individual donations, International donors' funds, and other possible financial sources.
	Resettlement Requirement	None
	Institutional Arrangement	A legal framework and/or official guidelines are indispensable to justify the fund system and prescribe its proper operation & management and its accounting system.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Commitment of DPC • Cooperation with District leaders • Technical support and advice from donors
Recommendation		<ul style="list-style-type: none"> • It is a key to build a sustainable mechanism of the fund management, assuring the transparent accounting system. • It is recommended that prior to the introduction of this fund concept over the City, a pilot project shall be conducted for 2 to 3 districts in order to identify actual problems and practical constraints in the local reality.

En-37

Subsector		Environmental Management	C
Core Strategy		Develop institutional and organizational systems to manage environment sustainability	C5
Nature of Project		Proposed by ST ¹⁾	
Title of Project / Program		Review and Reform of Current Privatization Policies	
Objectives		<ul style="list-style-type: none"> • To establish a performance appraisal system for the services provided by and the soundness of the operation and management of semi-public or privatized entities for environmental services such as SWM, sewage treatment, etc. • To examine reform policies/measures of privatized entities, if is necessary. 	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	All citizens of Danang City	
	Sub Components	<ul style="list-style-type: none"> • To design and set forth a performance assessment system of the business entities of public service providers, and organize an "Appraisal Taskforce Team" under DPC, DOF and DONRE. • To conduct periodical assessment on target entities, based on the developed assessment system and make suggestions, and recommendations on the improvement or reform, if is necessary. 	
	Plan and Layout	<ul style="list-style-type: none"> • Key Performance Indicators: also known as KPI or Key Success Indicators (KSI), help an organization define and measure progress toward organizational goals. Once an organization has analyzed its mission, identified all its stakeholders, and defined its goals, it needs a way to measure progress toward those goals. Key Performance Indicators are quantifiable measurements, agreed to beforehand, that reflect the critical success factors of an organization. KPIs, which are benchmark for a business activity monitoring (BAM), may includes not only those implying economic/financial efficiency but also satisfactory levels of subscribers/customers. • Appraisal Taskforce Team: officials to be assigned for the members of the taskforce team shall be well-trained to carry out the performance assessment based on BAM, and should be mandated with compulsory execution power. 	
	Operation and Management	Periodical and occasional appraisals shall be undertaken with administrative enforcement endorsed by DPC.	
	Cost (investment, recurrent)	No massive investment cost is needed, except for procurement of consultancy services (more or less 5-6 person-months)	
	Revenue (if any)	None	
	Rationale	Environmental services provided by the semi-public or private entities shall be rationalized, optimized and sustainable under the sound management, thereby benefiting all citizens.	
Implementation	Agency	DONRE, DOF and DPI	
	Planning Requirement	As the BAM under KPIs is popular in the business sector in developed countries, the basic framework may be easily established, then customized so as to be accorded with the local reality of Danang.	
	Funding	No massive initial investment is required, except for procurement of the consultancy service (more or less 5-6 person-month)	
	Resettlement Requirement	Not relevant	

	Institutional Arrangement	Either a legal basis or some administrative guidelines is needed to justify the appraisal activities with some enforcement power by the taskforce team.
Critical Factors / Conditions for Success	<ul style="list-style-type: none"> • Firm commitment by DPC and Steering Committee of “Danang-the Environmental City” 	
Recommendation	<ul style="list-style-type: none"> • The current policy framework for privatization of the public service providers, based on a PPP concept, is appreciable in general, but not always. The government sector’s responsibility, as a manager of providers, is still vital and indispensable. This project is to perform such a governmental responsibility. • As a pioneer model, it is recommended that Danang City shall establish a rational, mutually reliable and publicly transparent relation between the government and all environmental service providers. 	

Subsector		Environmental Management	C
Core Strategy		Develop institutional and organizational systems to manage environment sustainability	C5
Nature of Project		Proposed by ST ¹⁾	
Title of Project / Program		Establishment of the “Danang City Environmental Conservation Fund System”	
Objectives		<ul style="list-style-type: none"> • To facilitate environmental projects for natural conservation with financial back-up; • To provide financial supports to those who start up environmental business and development of environmental technologies for 3R activities and CO₂ reduction; and • To provide financial supports for promotion of eco-tourism activities and products. 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	Danang citizens and entrepreneurs for eco-business	
	Sub Components	<ol style="list-style-type: none"> (1) System design for the Environmental Conservation Fund (ECF) (2) Legal justification and preparation of guidelines for operation, management and accounting systems (3) Establishment of the ECF Management Office to be organized with the Management Board and Auditors. (4) Conduct of a training program for project-appraisers; financial advisors; and fund managers (5) Operation of financing supports for selected projects and activities for environmental projects and eco-tourism. 	
	Plan and Layout	<p><i>Notes: ECF may be integrated with the Reserve of Environment Fees that shall be levied by tourists and hotels located in environmentally sensitive areas as well as coastal areas.</i></p>	
Operation and Management	The establishment of a functional and sustainable system for operation and management is a key of this ECF project, including human resource development of the operation.		
Cost (investment, recurrent)	The initial fund is desired to be more than US\$ 50 million, and periodically replenished by additional funds.		
Revenue (if any)	O&M costs shall be covered with operational profits in the long run.		
Rationale	Financial sources can be diversified through the operation of		

		ECF, inviting private sector's contributions, donors assistance and individuals' donations, and a variety of environmental activities and projects/programs will be timely carried out.
Implementation	Agency	Joint execution with DPC, DOF and DONRE
	Planning Requirement	Thoughtful design of the entire mechanism is required to be made by professionals, based on learning of other countries' experiences.
	Funding	The fund raising process shall deliberately be managed with proactive initiatives of DPC, in close consultation with the stakeholders. International donors' assistance is required to assure the credibility of the fund management, thereby facilitating fund collection from the Business Sector, NGOs' contributions, individual donations and other possible financial sources.
	Resettlement Requirement	None
	Institutional Arrangement	Provision of a legal framework and/or official guidelines for proper operation & management and its accounting system is indispensable to justify this fund system from a social equity point of view.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strong commitment by DPC and Steering Committee of "Danang-the Environmental City" to endorse the establishment of the ECF; • Learning from experiences of other countries to seek for sustainable operation; • Public consensus of many stakeholder groups involved in environmental conservation and eco-tourism
Recommendation		<ul style="list-style-type: none"> • It is a key to build a sustainable mechanism of the fund management, assuring the transparent accounting system. • It is recommended that prior to the introduction of this fund concept with a full scale, a thoughtful preparatory work should be conducted with sufficient time, calling for active supports from professional financial institutes. • The proposed "Environment Fee System" might be controversial to be introduced, because of a fear of negative impact on tourist arrivals and tourism business. This system, however, is an effective financial tool to realize environmental conservation. A political decision needs to be made under extensive consultation with stakeholders.

SPATIAL DEVELOPMENT

Sp-1

Subsector		Spatial Development	D
Core Strategy		Update urban master plan and control mechanism	D1
Nature of Project		Proposed by ST	
Title of Project / Program		Upgrade of construction plan to “master plan”	
Objectives		<ul style="list-style-type: none"> • Improve the urban planning administration • Share a single master plan among all city departments and private sectors 	
Outline	Period	2013-2015	
	Location	Da Nang City	
	Beneficiaries (target group)	All stakeholders.	
	Sub Components	<ul style="list-style-type: none"> • Creating Master Plan Committee under DPC • Preparation of Master Plan based on DaCRISS study • Authorization 	
	Plan and Layout		
	Operation and Management		
	Cost (investment, recurrent)	Recurrent: US\$ 500,000	
	Revenue (if any)		
	Rationale	All city departments have own plan with little arrangement among them.	
Implementation	Agency	DPC, DPI, and DOC	
	Planning Requirement		
	Funding	Government Budget	
	Resettlement Requirement	None.	
	Institutional Arrangement	Refer to Prime Minister's Decision No. 882/QD-TTg, June 23, 2009. Establishment of Master Plan Committee under DPC Confirmation of authorization process	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Support from all related department is available. 	
Recommendation		<ul style="list-style-type: none"> • An integrated master plan should be shared among all city departments. • DPI and DOC should lead the discussion. 	

Sp-2

Subsector		Spatial Development	D
Core Strategy		Update urban master plan and control mechanism	D1
Nature of Project		Proposed by ST	
Title of Project / Program		Utilize the master plan to be a development framework for all city departments and private sector	
Objectives		<ul style="list-style-type: none"> • Ensure the implementation process of MP after authorization • Receive feedback for revision of MP 	
Outline	Period	2013-2015	
	Location	Da Nang City	
	Beneficiaries (target group)	All stakeholders.	
	Sub Components	<ul style="list-style-type: none"> • Creating Monitoring Committee under DPC • Check progress periodically. 	
	Plan and Layout		
	Operation and Management		
	Cost (investment, recurrent)	Recurrent: US\$ 200,000 / year	
	Revenue (if any)		
	Rationale	After the authorization of MP, monitoring of implementation process is important. This project facilitates the implementation process of MP.	
Implementation	Agency	DPC, DPI, and DOC	
	Planning Requirement		
	Funding	Government Budget	
	Resettlement Requirement	None.	
	Institutional Arrangement	Establishment of Monitoring Committee under DPC. Prioritize financial arrange for the projects in MP.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Authorization of Master Plan • Support from all related department 	
Recommendation		<ul style="list-style-type: none"> • DPI and DOC should lead the discussion. 	

Sp-3

Subsector		Spatial Development	D
Core Strategy		Update urban master plan and control mechanism	D1
Nature of Project		Proposed by ST	
Title of Project / Program		Disclose and disseminate the detailed plan to citizens	
Objectives		<ul style="list-style-type: none"> • Implement MP with private sector's involvement • Receive feedback for revision of MP 	
Outline	Period	2016-2025	
	Location	Da Nang City	
	Beneficiaries (target group)	Private sector.	
	Sub Components	<ul style="list-style-type: none"> • Public announcement of MP • Exhibition • Town meeting • Disclosure on Internet • Receiving feedback. 	
	Plan and Layout		
	Operation and Management		
	Cost (investment, recurrent)	Recurrent: US\$ 200,000 / year	
	Revenue (if any)		
	Rationale	People except government officials do not know the contents of the MP. This has been an obstacle of the implementation of master plan.	
Implementation	Agency	DOC	
	Planning Requirement		
	Funding	Government Budget	
	Resettlement Requirement	None.	
	Institutional Arrangement	Cooperation with district governments and communes.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Authorization of Master Plan • Support from district and commune. 	
Recommendation		<ul style="list-style-type: none"> • DPI and DOC should lead the discussion. 	

Sp-4

Subsector		Spatial Development	D
Core Strategy		Establish effective mechanism to control/ manage land use especially in peri-urban areas	D2
Nature of Project		Proposed by ST	
Title of Project / Program		Establish the building regulation and construction permission system to embody master plan	
Objectives		<ul style="list-style-type: none"> • Improve the building permission administration based on clear guideline • Promote appropriate urban development in peri-urban area 	
Outline	Period	2016-2025	
	Location	Urban Districts of Danang City	
	Beneficiaries (target group)	Building owners, constructors, and DOC staff	
	Sub Components	<ul style="list-style-type: none"> • Collect and organize necessary laws and regulation such as Building Code and Land Law, etc. • Development clear guideline and manuals for building appraisal staff of DOC • Prepare pamphlet to land owner, contractor, and developer. 	
	Plan and Layout		
	Operation and Management		
	Cost (investment, recurrent)	Recurrent: US\$ 200,000	
	Revenue (if any)	Building appraisal fee	
	Rationale	Control of building is a critical factor for the long term urban development of Danang. The purpose and shape of new building should conform to the existing regulation and MP. At the same time, the development of peri-urban area should be prevented from sprawling. Based on the MP, the peri-urban area should be developed with appropriate density.	
Implementation	Agency	DOC	
	Planning Requirement		
	Funding	Government Budget	
	Resettlement Requirement	None.	
	Institutional Arrangement	Confirmation of role and function of building permission.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Stability and appropriate amendment of Building Code. • Effective linkage with MP and Land Law. 	
Recommendation		<ul style="list-style-type: none"> • Regulation of building should be publicized in advance. • Avoidance of politicized intervention. 	

Sp-5

Subsector		Spatial Development	D
Core Strategy		Establish effective mechanism to control/ manage land use especially in peri-urban areas	D2
Nature of Project		Proposed by ST	
Title of Project / Program		Regulate the provision of LUR (Land Use Right)	
Objectives		<ul style="list-style-type: none"> • Improve the land administration (LUR and Land Registration) • Promote appropriate urban development in peri-urban areas 	
Outline	Period	2016-2025	
	Location	Da Nang City	
	Beneficiaries (target group)	Land owners, constructors, and DONRE staff	
	Sub Components	<ul style="list-style-type: none"> • Collect and organize necessary laws and regulation such as Building Code and Land Law, etc. • Improve land registration administration. (GIS, etc) • Development clear guideline and manuals for land administration staff of DONRE • Prepare regulation on new issue of LUR in the peri-urban area (size, shape and contact with roads). 	
	Plan and Layout		
	Operation and Management		
	Cost (investment, recurrent)	Recurrent: US\$ 200,000	
	Revenue (if any)	Land Use Fee	
	Rationale	LUR is an imperfect form of ownership. Due to this limitation, the land use is also influenced. Many smaller parcels of LUR promote small and lower building. In conjunction with building regulation, LUR should be regulated in shape, usage and split. In addition, land registration system should be improved as a national matter.	
Implementation	Agency	DONRE	
	Planning Requirement		
	Funding	Government Budget	
	Resettlement Requirement	None.	
	Institutional Arrangement	Confirmation of role and function of all land administration.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Stability and appropriate amendment of Land Law. • Effective linkage with Civil Law, Building Code and MP. 	
Recommendation		<ul style="list-style-type: none"> • Regulation of land should be publicized in advance. • Avoidance of politicized intervention. • Clarification of government involvement in land business. 	

Sp-14

Subsector		Spatial Development	D
Core Strategy		Develop new urban centers and develop existing urban areas	D3
Nature of Project		Proposed by ST	
Title of Project / Program		Designate new urban centers in Da Nang and Quang Nam Province	
Objectives		<ul style="list-style-type: none"> • Decentralize urban functions • Clarification of urban subcenters and attract investment • Promote sustainable land use in the long run • Prepare redevelopment scheme and incentive for existing urban area 	
Outline	Period	2016-2025	
	Location	Da Nang City	
	Beneficiaries (target group)	Land developers and residents	
	Sub Components	<ul style="list-style-type: none"> • Designate new urban subcenters and their area. • Decide investment incentive for developers (New and old area). • Prepare detailed plan for the area. • Setup Danang-Quang Nam Coordination Committee. 	
	Plan and Layout	Detailed Plan (1:5,000) for 3 subcenters	
	Operation and Management		
	Cost (investment, recurrent)	Investment: US\$ 100 million or more. Recurrent: US\$	
	Revenue (if any)	Land Use Fee	
	Rationale	The developing urban area requires active Central Business District (CBD). The MP designates three new subcenters.	
Implementation	Agency	DPC, DPI and DOC.	
	Planning Requirement		
	Funding	Government Budget and City Bond.	
	Resettlement Requirement	Local residents.	
	Institutional Arrangement	Involvement of all related departments.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Continuous economic development for land demand. • Strong support from central government. 	
Recommendation		<ul style="list-style-type: none"> • DPI and DOC should lead the projects. • Consider the introduction of PPP scheme as necessary. 	

Sp-15

Subsector		Spatial Development	D
Core Strategy		Develop new urban centers and develop existing urban areas	D3
Nature of Project		Proposed by ST	
Title of Project / Program		Develop business districts in new urban centers	
Objectives		<ul style="list-style-type: none"> • Attract service industries to new urban subcenters • Decentralize urban function 	
Outline	Period	2016-2025	
	Location	Subcenters of Danang City	
	Beneficiaries (target group)	Investors and residents	
	Sub Components	<ul style="list-style-type: none"> • Decide investment incentive for office developers. • Prepare detailed plan for the area. 	
	Plan and Layout	Detailed Plan (1:5,000) for three subcenters	
	Operation and Management		
	Cost (investment, recurrent)		
	Revenue (if any)	Land Use Fee, Corporate Tax	
	Rationale	The MP designates three new subcenters. Current Danang City does not have enough office floor area despite its growing demand. These subcenters are expected to generate employment of service industries.	
Implementation	Agency	DPI, DONRE and DOC.	
	Planning Requirement		
	Funding	Government Budget.	
	Resettlement Requirement	Local residents.	
	Institutional Arrangement	Involvement of all related departments.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Continuous economic development for office demand. • Strong support from private sector. 	
Recommendation		<ul style="list-style-type: none"> • DPI and DOC should lead the projects. • Consider the introduction of PPP scheme as necessary. 	

Sp-16

Subsector		Spatial Development	D
Core Strategy		Enhance urban landscape	D4
Nature of Project		Proposed by ST	
Title of Project / Program		Select prominent ten landscape sceneries in Danang	
Objectives		<ul style="list-style-type: none"> • Select representative landscape of Danang • Create icons of Danang • Improve people's awareness on landscape • Attract more tourists to scenery spots outside of beach 	
Outline	Period	2016-2025	
	Location	All city area	
	Beneficiaries (target group)	Citizen and tourists.	
	Sub Components	<ul style="list-style-type: none"> • Selection of ten landscapes with people's participation • Conduct photo contest on the selected landscape. • Publish photo album of the landscape • Announce the sites through the Internet 	
	Plan and Layout		
	Operation and Management		
	Cost (investment, recurrent)	Investment cost: US\$ 10,000.	
	Revenue (if any)		
	Rationale	Compared with other cities in Vietnam, Danang does not have a definitive urban landscape. This project rediscovers prominent ten landscapes in Danang.	
Implementation	Agency	DPI, DOC, DONRE, and DCST. Tourism Association	
	Planning Requirement		
	Funding	Government Budget and donation from tourism sector.	
	Resettlement Requirement		
	Institutional Arrangement	Establishment of Landscape Contest Committee.	
Critical Factors / Conditions for Success			
Recommendation			

Sp-17

Subsector		Spatial Development	D
Core Strategy		Enhance urban landscape	D4
Nature of Project		Proposed by ST	
Title of Project / Program		Reconsider street design to enhance urban landscape	
Objectives		<ul style="list-style-type: none"> • Recover pedestrian environment for residents and tourists • Convert electric cable in air to underground • Improve drainage system of side ditch • Enhance street planting and lighting 	
Outline	Period	2016-2025	
	Location	Central area of city	
	Beneficiaries (target group)	Citizen and tourists.	
	Sub Components	<ul style="list-style-type: none"> • Selection of pilot project area • Construct underground public utility ditch • Prohibit bike parking on sidewalk • Prepare bike parking off-street • Renovate pedestrian surface • Improve street furniture, planting and lighting 	
	Plan and Layout	Necessary	
	Operation and Management		
	Cost (investment, recurrent)	Investment cost: US\$ 500,000 / km	
	Revenue (if any)	Bike parking fee. Public utility ditch user charge.	
	Rationale	<p>The sidewalks of Danang are fully occupied by motorcycle parking. Pedestrians are forced to walk on the road and exposed to risk of traffic accident.</p> <p>In addition, the good walking environment is important not only for residents but also for tourists. The central core of Danang is stretched within walking distance. It is possible to connect core areas by pedestrian sidewalk network.</p>	
Implementation	Agency	DOT and DOC	
	Planning Requirement		
	Funding	Government Budget and donation from tourism sector.	
	Resettlement Requirement		
	Institutional Arrangement	Establishment of rules to utilize the public utility ditch. Regulation for each business premises to prepare bike parking on their lots.	
Critical Factors / Conditions for Success		People's consensus to prioritize pedestrian than motorcycles.	
Recommendation		DOT should coordinate the total usage of street. Coordinate with "Improve pedestrian walks and its network in the central city area" project.	

Sp-18

Subsector		Spatial Development	D
Core Strategy		Enhance urban landscape	D4
Nature of Project		Proposed by ST	
Title of Project / Program		Improve waterfront accessibility design	
Objectives		<ul style="list-style-type: none"> • Increase amenity of Danang • Improve environmental management capability 	
Outline	Period	2016-2025	
	Location	Han River waterfront Public beach of My Khe Beach and Danang Bay Waterfront of Son Tra Peninsular Low land of southern area of city	
	Beneficiaries (target group)	Citizen and tourists.	
	Sub Components	<ul style="list-style-type: none"> • Survey of waterfront ecosystem (brackish water system, fauna, flora, fishery, agriculture, disaster, transportation and recreation) • Improve waterfront accessibility along Han River • Improve seaside accessibility for public beach • Utilize lowland area for urban purpose (such as park) with function of water reservoir. 	
	Plan and Layout		
	Operation and Management		
	Cost (investment, recurrent)	Investment cost: US\$ 1 million (Han River waterfront) US\$ 1 million (Seaside improvement)	
	Revenue (if any)		
	Rationale	The waterfront of sea and river is the precious asset of Danang. The recent construction of Han River sidewalk greatly improved the attractiveness of Danang. In addition, more association with water environment is encouraged in order to enhance the water environment of Danang.	
Implementation	Agency	DONRE, DOT and DCST.	
	Planning Requirement		
	Funding	Government Budget.	
	Resettlement Requirement	As necessary.	
	Institutional Arrangement	Coordination among water-related stakeholders.	
Critical Factors / Conditions for Success			
Recommendation		DONRE should lead the project.	

Sp-19

Subsector		Spatial Development	D
Core Strategy		Enhance urban landscape	D4
Nature of Project		Proposed by ST	
Title of Project / Program		Identify and preserve modern architecture in old quarters	
Objectives		<ul style="list-style-type: none"> • Increase cultural amenity of Danang • Increase tourism attraction 	
Outline	Period	2016-2025	
	Location	Old city area.	
	Beneficiaries (target group)	Citizen and tourists.	
	Sub Components	<ul style="list-style-type: none"> • Survey of architectural heritages of Vietnamese and Western styles. • Designate significant architectures as cultural property. • Prepare budget and scheme for conservation • Publish map and album showing the properties. 	
	Plan and Layout		
	Operation and Management		
	Cost (investment, recurrent)	Investment cost: US\$ 50,000.	
	Revenue (if any)		
	Rationale	<p>Compared with Hue or Hoi An, Danang has shorter history. It is relatively difficult to find a pre-modern architecture even in the old city. Thus, there is no representative building to be an icon.</p> <p>However, some buildings have western style and remind people of the history of Danang. These as well as Vietnamese-styled temples are to be preserved as prominent cultural properties.</p>	
Implementation	Agency	DCST and DOC.	
	Planning Requirement		
	Funding	Government Budget.	
	Resettlement Requirement	Not necessary.	
	Institutional Arrangement	Coordination among water-related stakeholders.	
Critical Factors / Conditions for Success			
Recommendation		DCST should lead the project.	

HOUSING AND LIVING CONDITIONS

Lc-1

Subsector		Housing and Living Conditions	E
Core Strategy		Provide affordable housing for low-income group	E1
Nature of Project		Proposed by ST	
Title of Project / Program		Expand public housing provision	
Objectives		<ul style="list-style-type: none"> • Stabilize the housing market by providing public housing • Contribute to poverty reduction (See also "Promote public or semi-public housing for the new urban areas (D3-3)" project.)	
Outline	Period	2016-2025	
	Location	Mostly for peri-urban area	
	Beneficiaries (target group)	Low-income group	
	Sub Components	<ul style="list-style-type: none"> • Conduct market survey for housing market • Review activity of HMC (Housing Management Company) under DONRE. • Reorganize HMC or establish a new authority for public housing • Prepare/ buy land for public housing • Construct and operate the housing 	
	Plan and Layout	Necessary.	
	Operation and Management	By the new authority or private company.	
	Cost (investment, recurrent)	Investment cost: US\$ 10 million.	
	Revenue (if any)	Rent	
	Rationale	The housing market is still small and immature in Danang. Some low income group has difficulty to find an affordable apartment. It is necessary for public sector to support low income group by providing public housing.	
Implementation	Agency	DONRE, DOC, HMC.	
	Planning Requirement		
	Funding	Government Budget, city bond and support from National Government.	
	Resettlement Requirement	As necessary.	
	Institutional Arrangement	The housing authority should receive support from various financial sources.	
Critical Factors / Conditions for Success			
Recommendation		The project "Promote public or semi-public housing for the new urban areas (D3-3)" focuses on the newly urbanized area. This project will deal with the already buildup area.	

Lc-2

Subsector		Housing and Living Conditions	E
Core Strategy		Provide affordable housing for low-income group	E1
Nature of Project		Proposed by ST	
Title of Project / Program		Provision of adequate resettlement housing, industrial workers' housing and accommodations for students	
Objectives		<ul style="list-style-type: none"> • Improve the specially purposed housings for socially handicapped. • Contribute to poverty reduction 	
Outline	Period	2016-2025	
	Location	Mostly for peri-urban area	
	Beneficiaries (target group)	Low-income group (Factory workers, resettled people and students)	
	Sub Components	<ul style="list-style-type: none"> • Survey of specially purposed housings • Arrangement of support scheme such as subsidies or direct provision. 	
	Plan and Layout	Necessary.	
	Operation and Management	By the owners of apartment complex.	
	Cost (investment, recurrent)	Investment cost: US\$ 5 million. (Loan and grant)	
	Revenue (if any)	Repayment or rent	
	Rationale	Under the immature housing market of Danang, some social groups are missing the formal access to the housing market. Then, the public sector should supplement or subsidize the additional housing for such groups. These groups include involuntarily resettled people, factory workers from rural area and students at higher level of education.	
Implementation	Agency	DONRE, DOC, Enterprise, and Universities.	
	Planning Requirement		
	Funding	Government Budget, city bond and support from National Government.	
	Resettlement Requirement	As necessary.	
	Institutional Arrangement	Prepare loan or subsidy scheme for housing provision.	
Critical Factors / Conditions for Success		Availability of land for apartment complex.	
Recommendation		<p>Effective linkage with economic development and urban development is expected.</p> <p>Except housing for resettlement people, direct provision of housing by public sector should be avoided.</p>	

Lc-3

Subsector		Housing and Living Conditions	E
Core Strategy		Provide affordable housing for low-income group	E1
Nature of Project		Proposed by ST	
Title of Project / Program		Provision of residential land to market	
Objectives		<ul style="list-style-type: none"> • Provide vacant land to real estate company for advanced urban complex development. • Prevent development of small scale residential development 	
Outline	Period	2016-2025	
	Location	Mostly for peri-urban area and new urban area	
	Beneficiaries (target group)	Real estate company, residents	
	Sub Components	<ul style="list-style-type: none"> • Survey of land and housing market. • Arrangement of provision scheme (LUR, land rental, and (permanent of fixed-term)lease) 	
	Plan and Layout	Necessary.	
	Operation and Management	By the owners of hosing complex.	
	Cost (investment, recurrent)	Investment cost: US\$ 1 million. (without civil work)	
	Revenue (if any)	Sale of LUR or Land lease fee	
	Rationale	<p>Land provision from Danang City to private sector has mainly two types: One is sale of small parcels to individuals. The other is sale of large area LUR or concession for real estate companies. In some cases, the land reclamation becomes such a heavy burden for company that the development progress is not smooth.</p> <p>There are many schemes of land provision besides the above two. (1) Land lease (permanent, fixed-term), (2) Land sale after reclamation, (3) Sale with conditionality to provide low-income housings, etc., are the potential options for land provision.</p>	
Implementation	Agency	DONRE, DOC and Real Estate Companies	
	Planning Requirement		
	Funding	Government Budget, city bond and support from National Government.	
	Resettlement Requirement	As necessary.	
	Institutional Arrangement	Arrange how to use land related revenue.	
Critical Factors / Conditions for Success		Land availability for provision.	
Recommendation		Effective linkage with economic development and urban development is expected.	

Lc-4

Subsector		Spatial Development	D
Core Strategy		Develop new urban centers and develop existing urban areas	D3
Nature of Project		Proposed by ST	
Title of Project / Program		Promote public or semi-public housing for new urban areas	
Objectives		<ul style="list-style-type: none"> • Attract new residents from other provinces. • Create good living environment. 	
Outline	Period	2016-2025	
	Location	Subcenters of Danang City	
	Beneficiaries (target group)	New residents	
	Sub Components	<ul style="list-style-type: none"> • Conduct housing market survey for rental apartment • Establish public or semi-public housing authority • Finance to the authority. • Construct new residential units 	
	Plan and Layout	Detailed Plan (1:5,000) for three subcenters	
	Operation and Management	Housing Authority or its subsidiary.	
	Cost (investment, recurrent)	Investment cost: US\$ 10 million.	
	Revenue (if any)	Rent	
	Rationale	<p>The Housing Management Company (HMC) of DONRE once worked for the provision of public housing in Danang but the roles and functions are much smaller than ever.</p> <p>The housing demand for new residents is growing. Provision of public housing will contribute to the long-term economic growth of Danang.</p>	
Implementation	Agency	DPI, DOC, DONRE, and DOLISA.	
	Planning Requirement		
	Funding	Government Budget and City Bond.	
	Resettlement Requirement	Local residents.	
	Institutional Arrangement	Reorganization of HMC or new establishment of an authority.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Continuous economic development for housing demand. • Strong support from public sector. <p>New authority does not distort the private housing market.</p>	
Recommendation		<ul style="list-style-type: none"> • DPI and DONRE should lead the projects. • Consider the introduction of PPP scheme in case of semi-public authority. 	

TRANSPORTATION DEVELOPMENT

Tr-1

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Commuter Road Commuter Road: Commuter road development	
Objectives		<ul style="list-style-type: none"> This road construction is to access along with Expressway. 	
Outline	Period	2016-2025	
	Location	The project road is located along with the North-South expressway Hoa Phong and Hoa Lien District. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 21.30km (construction period: 3 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 81.90 mil. (Land: 38.40 mil., Construction: 43.52 mil.)	
	Revenue (if any)	N/A	
Rationale	Formulation of a substantial arterial road network for the new CBD is very essential.		
Implementation	Agency	Danang Department of Transport (DOT)	
	Planning Requirement	No critical technical issues	
	Funding	City Budget	
	Resettlement Requirement	The project requires land acquisition and resettlement	
	Institutional Arrangement	N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Land acquisition and clearance for the project will be critical because the area is being developed rapidly. 	
Recommendation		<ul style="list-style-type: none"> Implementation of this road project shall be along with expressway construction. 	

Tr-6

Subsector		Transportation Development	F
Core Strategy		Develop attractive public transport system integrated with urban development	F2
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Urban Bus Expansion Project	
Objectives		<ul style="list-style-type: none"> To improve urban bus services with modern forms of management and operation to accommodate targeted 15% of the total demand by 2015. 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	Inhabitants of Danang City Urban bus transport users	
	Sub Components	<ul style="list-style-type: none"> Planning and management of urban bus services Purchase of bus fleets Installation of related facilities and equipment Capacity development for DOT and operators Land acquisition and resettlement (if any) 	
	Plan and Layout	<ul style="list-style-type: none"> Define the set of bus routes and bus operator by corridor; Determine demand by bus route Determine type of bus services and estimate a required number of bus fleets to meet the demand to year 2015. Conduct engineering studies for depot sites, bus sheds/stops and ticketing systems, etc. Design the organization and staffing model in providing the proposed bus services Provide financial management advice to bus operators Conduct economic analysis Prepare promotional materials to convince private investors to take over the management of bus system Provide technical assistance to DOT and bus operators 	
	Operation and Management	Buses are operated by state own joint venture company. Bus operators are managed by DOT.	
	Cost (investment, recurrent)	Total US\$ 52 mil. (US\$ 47 mil. for purchasing bus fleets by 2015, US\$ 2 mil. for installation of bus stops, depot and ticketing & management system, US\$ 2 mil. for studying detailed plan, US\$ 1 mil. for conducting capacity development of DOT and operators)	
	Revenue (if any)	Revenue from fare income, advertisement, small retail business, etc.	
	Rationale	In order to promote the use of public transport, improvement and expansion of urban bus system is very essential	
Implementation	Agency	Danang Department of Transport (DOT)	
	Planning Requirement	Technical assistance is required to resolve problems and to create a road map	
	Funding	City Budget, Credit or ODA Loan	
	Resettlement Requirement	N/A	
	Institutional Arrangement	Strengthening of the capacity of public transport management division under DOT	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Ridership of bus transport Separation of bus traffic from other mixed traffic in congested road sections 	
Recommendation		<ul style="list-style-type: none"> Bus transport shall be promoted to attract the people. 	

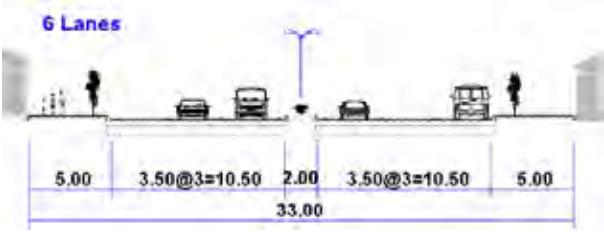
Tr-7

Subsector		Transportation Development	F
Core Strategy		Develop attractive public transport system integrated with urban development	F2
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Pedestrian Environment Improvement Project	
Objectives		<ul style="list-style-type: none"> • To provide safe and convenient walking environment for pedestrians in the CBD • The project will promote the use of public transport and increase the attractiveness of commercial and tourism sectors in the CBD 	
Outline	Period	2016 - 2025	
	Location	CBD (Hai Chau, Thanh Khe), new urban centers (Lien Chieu, Son Tra, Ngu Hanh Son)	
	Beneficiaries (target group)	Inhabitants of Danang City Pedestrian in the CBD	
	Sub Components	<ul style="list-style-type: none"> • Promotion of walkable CBD • Pedestrianization • Access to bus priority corridor and UMRT stations • Walkable new urban centers 	
	Plan and Layout	<ul style="list-style-type: none"> - Standards for sidewalks shall be further studied and designed by type of area and road - Pedestrian network shall be further studied and formulated 	
	Operation and Management	N/A	
	Cost (investment, recurrent)	Phase 1 (-2015): US\$ 1 mil. for the existing CBD Phase 2 (2015-2025): US\$ 4 mil. for new urban centers	
	Revenue (if any)	N/A	
	Rationale	Provision of safe and convenient walking environment for the pedestrians in the CBD could promote the use of public transport and increase of attractiveness of commercial and tourism sectors. Use of walking and public transport requires less road space and produces less negative impact on air quality.	
Implementation	Agency	Danang Department of Transport (DOT), District People's Committee	
	Planning Requirement	No critical technical issues	
	Funding	City Budget	
	Resettlement Requirement	N/A	
	Institutional Arrangement	N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Car and bicycle parking on road side and sidewalk shall be strictly controlled • Bus services shall be significantly improved. • Cooperation of roadside establishments shall be necessary. 	
Recommendation		<ul style="list-style-type: none"> • Further study shall be conducted to make a detailed plan of the project 	

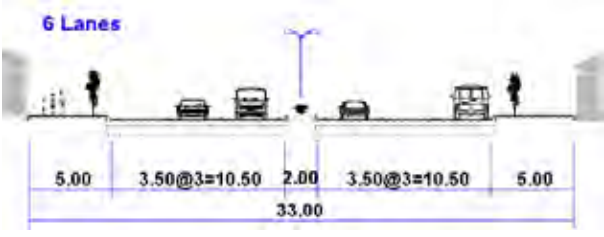
Tr-8

Subsector		Transportation Development	F
Core Strategy		Develop attractive public transport system integrated with urban development	F2
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Bicycle Network Development Project	
Objectives		<ul style="list-style-type: none"> • To develop a bicycle network • The project will promote the use of public transport and increase the attractiveness of commercial and tourism sectors in the CBD 	
Outline	Period	This project is to be implemented step by step through the Master Plan period from 2016-2025.	
	Location	CBD (Hai Chau, Thanh Khe), new urban centers (Lien Chieu, Son Tra, Ngu Hanh Son)	
	Beneficiaries (target group)	Inhabitants of Danang City Road users in the CBD	
	Sub Components	<ul style="list-style-type: none"> • Formulation of bicycle network plan and design • Development of bicycle network and related facilities 	
	Plan and Layout	<ul style="list-style-type: none"> - Exclusive on-road bike lane - Bicycle-motorcycle only road - Painted bike path on wide sidewalk - Multi-purpose trail - Supporting facilities and traffic rules on bicycling (inclusive of bike lockers at activity centers and transit stations, signs and markings, pamphlets on traffic rules and bicycle facilities, and maintenance of pavements and facilities, etc.) 	
	Operation and Management	N/A	
	Cost (investment, recurrent)	Cost for bicycle network development is tentatively assumed approximately US\$ 5 million.	
	Revenue (if any)	N/A	
	Rationale	Provision of bicycle network could promote the use of public transport and increase of attractiveness of commercial and tourism sectors in the CBD. Use of bicycle and public transport requires less road space and produces less negative impact on air quality.	
Implementation	Agency	Danang Department of Transport (DOT), District People's Committee	
	Planning Requirement	No critical technical issues	
	Funding	City Budget	
	Resettlement Requirement	N/A	
	Institutional Arrangement	N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Traffic rule on bicycling shall be clearly defined. • Consensus of the citizens to assign the exclusive road spaces for bicycle traffic in the CBD. 	
Recommendation		<ul style="list-style-type: none"> • Starts from the formulation of bicycle network plan 	

Tr-12

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development A1: Main Roads in Lien Chieu New CBD	
Objectives		<ul style="list-style-type: none"> To formulate the primary road network in Lien Chieu new CBD to accommodate inter-urban traffic demand. 	
Outline	Period	2010 - 2012	
	Location	The project road is located in Hoa Minh Area in Lien Chieu District, where new CBD development is proposed. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 5.10km (construction period: 2 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 29.07mil. (Land: 14.28 mil., Construction: 14.79 mil.)	
	Revenue (if any)	N/A	
	Rationale	Formulation of a substantial arterial road network for the new CBD is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget	
Resettlement Requirement		The project requires land acquisition and resettlement	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Land acquisition and clearance for the project will be critical because the area is being developed rapidly. 	
Recommendation		<ul style="list-style-type: none"> Implementation of this road project shall be ahead of urban development because urban development in this area is already in progress. 	

Tr-13

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development A2: Main Roads in Lien Chieu New CBD	
Objectives		<ul style="list-style-type: none"> To formulate the primary road network in Lien Chieu new CBD to accommodate inter-urban traffic demand. 	
Outline	Period	2010 - 2012	
	Location	The project road is located in Hoa Minh Area in Lien Chieu District, where new CBD development is proposed. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 2.1km (construction period: 1 year) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 11.97 mil. (Land: 5.88 mil., Construction: 6.09 mil.)	
	Revenue (if any)	N/A	
	Rationale	Formulation of a substantial arterial road network for the new CBD is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget	
Resettlement Requirement		The project requires land acquisition and resettlement	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Land acquisition and clearance for the project will be critical because the area is being developed rapidly. 	
Recommendation		<ul style="list-style-type: none"> Implementation of this road project shall be ahead of urban development because urban development in this area is already in progress. 	

Tr-14

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development P1: Danang Urban Bypass	
Objectives		<ul style="list-style-type: none"> To develop a back bone of the primary road network for inter-urban axis of the city to meet a huge transportation demand between the Lien Chieu new CBD and new urban center in Ngu Hanh Son District and southern urban areas. 	
Outline	Period	2016 - 2025	
	Location	The project road straddles on midlands of three districts of Lien Chieu, Cam Le and Hoa Van and traverses in parallel with the proposed North-South High-Speed Railway. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City and adjoining areas	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 22.0km (construction period: 3 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 119.40mil. (Land: 41.23 mil., Construction: 78.12mil.)	
	Revenue (if any)	N/A	
	Rationale	Formulation of substantial arterial road network for the inter-urban axis is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget or ODA Loan	
Resettlement Requirement		The project requires land acquisition and resettlement	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Land acquisition and clearance for the project will be critical because the area is being developed rapidly. 	
Recommendation		<ul style="list-style-type: none"> Implementation of this road project shall be ahead of urban development because urban development in this area is already in progress. 	

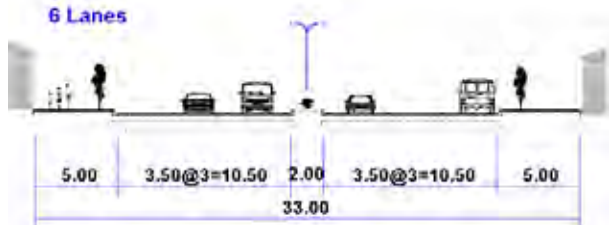
Tr-15

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development P2: University Avenue	
Objectives		<ul style="list-style-type: none"> To formulate the primary road network in Ngu Hanh Son new urban center to accommodate inter-urban traffic demand. 	
Outline	Period	2016 - 2025	
	Location	The project road is located in Ngu Hanh Son District, just west side of the proposed premises of the Danang University. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 8.0km (construction period: 3 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 40.80 mil. (Land: 11.55 mil., Construction: 29,26 mil.)	
	Revenue (if any)	N/A	
	Rationale	Formulation of a substantial arterial road network for the new urban center is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget	
Resettlement Requirement		The project requires land acquisition and resettlement	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Strict control of urban development in accordance with the proposed land use plan shall be implemented by Department of Construction (MOC). 	
Recommendation		<ul style="list-style-type: none"> Land acquisition and clearance for the project shall be started as soon as possible before a sprawled urban development becomes obvious. 	

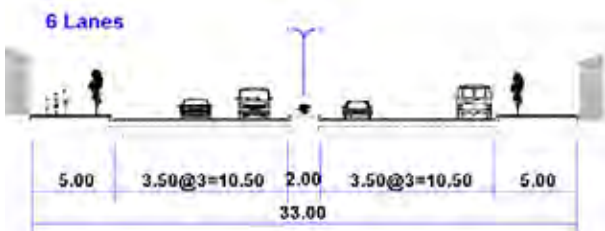
Tr-16

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development P3: University Avenue	
Objectives		<ul style="list-style-type: none"> To formulate the primary road network in Ngu Hanh Son new urban center to accommodate inter-urban traffic demand. 	
Outline	Period	2013 - 2015	
	Location	The project road is located in Ngu Hanh Son District, just east side of the proposed premises of the Danang University. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 2.50km (construction period: 2 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 9.20 mil. (Land: 4.37 mil., Construction: 4.83 mil.)	
	Revenue (if any)	N/A	
	Rationale	Formulation of a substantial arterial road network for the new urban center is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget	
Resettlement Requirement		The project requires land acquisition and resettlement	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Strict control of urban development in accordance with the proposed land use plan shall be implemented by Department of Construction (MOC). 	
Recommendation		<ul style="list-style-type: none"> Land acquisition and clearance for the project shall be started as soon as possible before a sprawled urban development becomes obvious. 	

Tr-17

Subsector		Transportation Development	F
Core Strategy		Establish effective interface between urban and regional transport	F1
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development P4: North-South Highway	
Objectives		<ul style="list-style-type: none"> To develop a back bone of the primary road network for main urban axis of the city to meet a huge transportation demand between the existing CBD in Hai Chau District and new urban center in Hoa Qui, Ngu Hanh Son District. 	
Outline	Period	2016 - 2025	
	Location	The project road is located center of Hoa Xuan and Hoa Quy new residential area. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City and adjoining areas	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 5.0km (construction period: 2 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 20.3 mil. (Land: 5.85 mil., Construction: 14.43 mil)	
	Revenue (if any)	N/A	
	Rationale	Formulation of a substantial arterial road network for the new residential area is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget	
Resettlement Requirement		The project requires land acquisition and resettlement.	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Strict control of urban development in accordance with the proposed land use plan shall be implemented by Department of Construction (MOC). 	
Recommendation		<ul style="list-style-type: none"> Land acquisition and clearance for the project shall be started as soon as possible before a sprawled urban development becomes obvious. 	

Tr-18

Subsector		Transportation Development	F
Core Strategy		Establish effective interface between urban and regional transport	F1
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development P5: Access road of North–South Expressway – Bus terminal	
Objectives		<ul style="list-style-type: none"> • To connect the North – South Expressway with Central Bus terminal • To improve local road transportation corridor for local regional traffic demand. 	
Outline	Period	2016 - 2025	
	Location	The project road is located in Southside of Lien Chieu district. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City and adjoining areas	
	Sub Components	<ul style="list-style-type: none"> • Land acquisition and resettlement • Construction of a new road section with length of 3.9km (construction period: 2 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 22.80 mil. (Land: 6.45 mil., Construction: 16.34 mil)	
	Revenue (if any)	N/A	
	Rationale	Formulation of a substantial arterial road network connecting with a regional transportation network is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget or Central Government Fund	
Resettlement Requirement		The project requires land acquisition and resettlement	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strict control of urban development in accordance with the proposed land use plan shall be implemented by Department of Construction (MOC). 	
Recommendation		<ul style="list-style-type: none"> • Land acquisition and clearance for the project shall be started as soon as possible before a sprawled urban development becomes obvious. 	

Tr-19

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development S1: North-South Highway 1	
Objectives		<ul style="list-style-type: none"> To develop a back bone of the primary road network for main urban axis of the city to meet a huge transportation demand between the existing CBD in Hai Chau District and new urban center in Hoa Qui, Ngu Hanh Son District. 	
Outline	Period	2015 - 2025	
	Location	The project road is almost on Phan Chu Trinh St., in Hai Chau District (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 6.10km (construction period: 2 years) 	
	Plan and Layout	<p>1</p> <p>6 Lanes</p> <p>5.00 3.50@3=10.50 2.00 3.50@3=10.50 5.00</p> <p>33.00</p>	
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 214.70 mil. (Land: 189.1 mil., Construction: 25.62 mil.)	
	Revenue (if any)	N/A	
Rationale	Formulation of substantial arterial road network for the main urban axis is very essential.		
Implementation	Agency	Danang Department of Transport (DOT)	
	Planning Requirement	No critical technical issues	
	Funding	City Budget or ODA Loan	
	Resettlement Requirement	The project requires land acquisition and resettlement	
	Institutional Arrangement	N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Strict control of urban development in accordance with the proposed land use plan shall be implemented by Department of Construction (MOC). 	
Recommendation		<ul style="list-style-type: none"> Land acquisition and clearance for the project shall be started as soon as possible before a sprawled urban development becomes obvious. 	

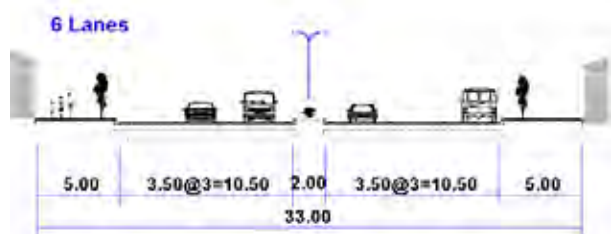
Tr-20

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development S2: North-South Highway 1	
Objectives		<ul style="list-style-type: none"> Primary road network in Son Tra new urban center and to distribute the intra-area traffic from primary roads. 	
Outline	Period	2010 - 2012	
	Location	This project road is located in the southern flat area of Son Tra District where Son Tra new urban center development is proposed. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 5.30km (construction period: 2 years) 	
	Plan and Layout	<p>1</p> <p>6 Lanes</p> <p>5.00 3.50@3=10.50 2.00 3.50@3=10.50 5.00</p> <p>33.00</p>	
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 38.9 mil. (Land: 29.7 mil., Construction: 9.18 mil.)	
	Revenue (if any)	N/A	
	Rationale	Formulation of substantial arterial road network for the main urban axis is very essential.	
Implementation	Agency	Danang Department of Transport (DOT)	
	Planning Requirement	No critical technical issues	
	Funding	City Budget or ODA Loan	
	Resettlement Requirement	The project requires land acquisition and resettlement	
	Institutional Arrangement	N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Strict control of urban development in accordance with the proposed land use plan shall be implemented by Department of Construction (MOC). 	
Recommendation		<ul style="list-style-type: none"> Land acquisition and clearance for the project shall be started as soon as possible before a sprawled urban development becomes obvious. 	

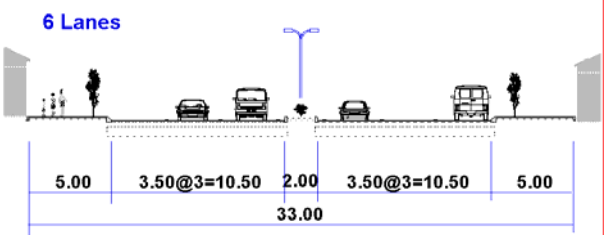
Tr-21

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development S3: North-South Highway Extension	
Objectives		<ul style="list-style-type: none"> To formulate the primary road network in Ngu Hanh Son new urban center to accommodate inter-urban traffic demand. 	
Outline	Period	2013 - 2015	
	Location	The project road is located in Ngu Hanh Son District and an extension of the on-going Southern Road Project (funded by PIIP of World Bank) up to coastal road. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City and adjoining areas	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 6.0km (construction period: 1.5 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 36.6 mil. (Land: 10.35 mil., Construction: 26.22 mil.)	
	Revenue (if any)	N/A	
	Rationale	Formulation of a substantial arterial road network for the new urban center is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget	
Resettlement Requirement		The project requires land acquisition and resettlement	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Strict control of urban development in accordance with the proposed land use plan shall be implemented by Department of Construction (MOC). 	
Recommendation		<ul style="list-style-type: none"> Land acquisition and clearance for the project shall be started as soon as possible before a sprawled urban development becomes obvious. 	

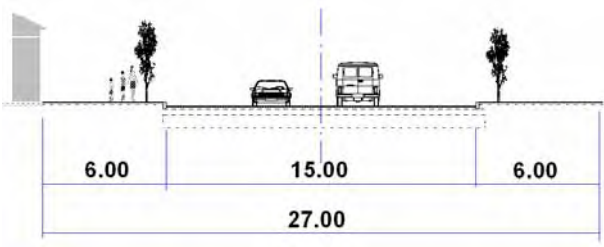
Tr-22

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development S4: Eastside Hoa Xuan – Ngu Hanh Son Road	
Objectives		<ul style="list-style-type: none"> To formulate the primary road network in Son Thuy, Ngu Hanh Son district area to accommodate inter-urban traffic demand. 	
Outline	Period	2013 - 2015	
	Location	The project road is in Son Thuy, Ngu Hanh Son district area, where light industries and suburban residential areas are to be developed. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 2.30km (construction period: 2 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 7.60 mil. (Land: 3.61 mil., Construction: 3.99 mil)	
	Revenue (if any)	N/A	
	Rationale	Formulation of a substantial arterial road network for the new residential area is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget	
Resettlement Requirement		The project requires land acquisition and resettlement.	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Land acquisition and clearance for the project will be critical because the area is being developed rapidly. 	
Recommendation		<ul style="list-style-type: none"> Implementation of this road project shall be ahead of urban development because urban development in this area is already in progress. 	

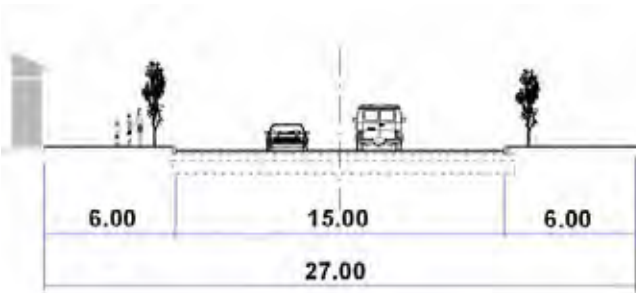
Tr-23

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Primary Road Network Development S5: Westside Hoa Chau – Hoa Xuan - Ngu Hanh Son Road	
Objectives		<ul style="list-style-type: none"> To formulate the primary road network in Hoa Chau – Hoa Xuan - Ngu Hanh Son to accommodate inter-urban traffic demand. 	
Outline	Period	2016 - 2025	
	Location	The project road is located Westside Hoa Chau – Hoa Xuan - Ngu Hanh Son to connect the proposed residential area with industrial zones. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	Inhabitants of Danang City	
	Sub Components	<ul style="list-style-type: none"> Land acquisition and resettlement Construction of a new road section with length of 3.6km (construction period: 2 years) 	
	Plan and Layout	 <p>6 Lanes</p> <p>5.00 3.50@3=10.50 2.00 3.50@3=10.50 5.00</p> <p>33.00</p>	
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 51.3 mil. (Land: 21.66 mil., Construction: 29.64 mil.)	
	Revenue (if any)	N/A	
	Rationale	Formulation of a substantial arterial road network for the new CBD is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget	
Resettlement Requirement		The project requires land acquisition and resettlement	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Land acquisition and clearance for the project will be critical because the area is being developed rapidly. 	
Recommendation		<ul style="list-style-type: none"> Implementation of this road project shall be ahead of urban development because urban development in this area is already in progress. 	

Tr-25

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		District Road Network Development Improvement of District Road No. 601	
Objectives		• Improvement of District Road	
Outline	Period	2010 - 2012	
	Location	District Road No. 601 is located from Lien Chieu district to city border of De Bay. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	District residents	
	Sub Components	<ul style="list-style-type: none"> • Land acquisition and resettlement • Road Improvement Work with total length of 25km (construction period: 2 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 25.00 mil. (Land: Existing Width., Construction: 25.00 mil.)	
	Revenue (if any)	N/A	
Rationale	Formulation of a substantial arterial road network for the new urban area is very essential.		
Implementation	Agency	Danang Department of Transport (DOT)	
	Planning Requirement	No critical technical issues	
	Funding	City Budget	
	Resettlement Requirement	The project requires land acquisition and resettlement	
	Institutional Arrangement	N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Land acquisition and clearance for the project will be critical because the area is being developed rapidly. 	
Recommendation		<ul style="list-style-type: none"> • Implementation of this road project shall be ahead of urban development because urban development in this area is already in progress. 	

Tr-26

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		District Road Network Development Improvement of District Road No. 604	
Objectives		• Improvement of District Road	
Outline	Period	2010 - 2012	
	Location	District Road No. 604 is located from Hoa Phong to city border of Quang Nam district. (refer to attachment: Road Project Location Map)	
	Beneficiaries (target group)	District residents	
	Sub Components	<ul style="list-style-type: none"> • Land acquisition and resettlement • Road Improvement Work with total length of 25km (construction pemproveriod: 2 years) 	
	Plan and Layout		
	Operation and Management	N/A	
	Cost (investment, recurrent)	US\$ 43.00 mil. (Land: Existing Width., Construction: 43.00 mil.)	
	Revenue (if any)	N/A	
Rationale	Formulation of a substantial arterial road network for the new urban area is very essential.		
Implementation	Agency	Danang Department of Transport (DOT)	
	Planning Requirement	No critical technical issues	
	Funding	City Budget	
	Resettlement Requirement	The project requires land acquisition and resettlement	
	Institutional Arrangement	N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Land acquisition and clearance for the project will be critical because the area is being developed rapidly. 	
Recommendation		<ul style="list-style-type: none"> • Implementation of this road project shall be ahead of urban development because urban development in this area is already in progress. 	

Tr-27

Subsector		Transportation Development	F
Core Strategy		Develop effective roads system in integration with land use	F3
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Interchange Development Project	
Objectives		<ul style="list-style-type: none"> • To introduce grade separation on existing and possible intersections where the traffic situation will be critical • To separate the traffic flow and to reduce the transport cost due to delay of traffic flow. 	
Outline	Period	2016-2025	
	Location	A priority to introduce grade separation is essentially given to intersections between primary roads. However, the existing critical intersections which are located in the city center are to be excluded from this project because an expansion of road ROW at intersection is generally very difficult. Those are to be improved by traffic management measures.	
	Beneficiaries (target group)	Inhabitants of Danang City and adjoining areas Users of primary and secondary road network	
	Sub Components	<ul style="list-style-type: none"> • Land acquisition and resettlement (if any) • Construction of a grade separated interchange 	
	Plan and Layout	Although the detailed are to be further studied and planned by location, the number of interchanges by type is as follows: <ul style="list-style-type: none"> - Trumpet Type (3-legs): 3 locations - Y Type (3legs): 9 locations - Cloverleaf Type (4 legs): 3 locations - Diamond Type (4-legs): 18 locations - Special type for connecting with expressway: 2 locations 	
	Operation and Management	N/A	
	Cost (investment, recurrent)	Total US\$ 99.1 mil. (ROW: ----- mil., Construction:99.1 mil) (cost by location is shown in the attachment)	
	Revenue (if any)	N/A	
	Rationale	Formulation of efficient primary road network for entire city is very essential.	
	Implementation	Agency	Danang Department of Transport (DOT)
Planning Requirement		No critical technical issues	
Funding		City Budget or ODA Loan	
Resettlement Requirement		The project requires land acquisition and resettlement for ROW.	
Institutional Arrangement		N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Land acquisition and clearance for the project ROW will be critical because the area is being developed rapidly. 	
Recommendation		<ul style="list-style-type: none"> • Implementation of this project shall be at same time of the development of primary road network. 	

Tr-29

Subsector		Transportation Development	F
Core Strategy		Strengthen traffic management system for efficient and safe movement of passenger and freight	F4
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Local Traffic Management Project	
Objectives		<ul style="list-style-type: none"> • To improve a road facilities and traffic management at district level • To improve a road traffic safety at district level 	
Outline	Period	2016 - 2025	
	Location	7 Districts in Danang City	
	Beneficiaries (target group)	Inhabitants of Danang City and adjoining areas Users of local road network	
	Sub Components	<ul style="list-style-type: none"> • Planning and monitoring • Implementation (construction works, installation, etc.) • Land acquisition and resettlement (if any) 	
	Plan and Layout	<p>Specific Items to be covered by this improvement are proposed as follows:</p> <ul style="list-style-type: none"> - Road pavement improvement - Intersection geometric improvement - Sidewalk improvement - Road marking improvement (lane line, stop line, pedestrian crossing, etc.) - Traffic sign and information - Traffic safety facilities 	
	Operation and Management	N/A	
	Cost (investment, recurrent)	Approximately US\$ 100 mil.	
	Revenue (if any)	N/A	
	Rationale	Improvement of local road facilities and traffic management is essential to provide an efficient and safe traffic conditions for the Inhabitants of Danang City.	
Implementation	Agency	Danang Department of Transport (DOT) District People's Committees	
	Planning Requirement	No critical technical issues	
	Funding	City Budget	
	Resettlement Requirement	N/A	
	Institutional Arrangement	N/A	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Coordination between DOT, District People's Committee and Police, etc. 	
Recommendation		<ul style="list-style-type: none"> • Substantial public relation activities are to be conducted to obtain a consensus for the proposed improvements. 	

Tr-33

Subsector		Transportation Development	F
Core Strategy		Develop water transport services	F5
Nature of Project		Proposed by DC / Revision of DC Project / Proposed by ST ²⁾	
Title of Project / Program		Cruising Service Development Project	
Objectives		<ul style="list-style-type: none"> • To develop enjoyable cruising services for tourists • The project will increase the tourism attractiveness of Danang City 	
Outline	Period	This project is to be implemented step by step through the Master Plan period from 2016-2025.	
	Location	Coastal Areas and Hang River for Cruise Ship Terminal	
	Beneficiaries (target group)	Inhabitants of Danang City Tourists to Danang City	
	Sub Components	<ul style="list-style-type: none"> • Preparation of policy, rules and regulations on operation of cruising service for the investment of private sector • Planning and development of infrastructures and facilities such as cruise ship terminals, systems for aids to navigation and emergency rescue, etc. 	
	Plan and Layout	<ul style="list-style-type: none"> - The cruising services could be broadly divided into two types, regular and chartering. - The government will prepare plan and develop infrastructures and facilities such as cruise ship terminals, systems for aids to navigation and emergency rescue, etc. 	
	Operation and Management	The government provides basic infrastructure and facilities and private sector makes use of them and operates cruising services	
	Cost (investment, recurrent)	Cost for development of cruise ship terminal is tentatively assumed approximately US\$ 2 million with related facilities and equipment.	
	Revenue (if any)	Terminal Fee	
Implementation	Rationale	Tourism is one of the core issues for the development of Danang City. Its appealing features should be further strengthened as much as possible. Marine recreations at sea and beaches are ones of significant tourism resources of Danang City. Therefore, cruising services should be further promoted in combination with other marine activities such as diving and fishing, etc.	
	Agency	Danang Department of Transport (DOT)	
	Planning Requirement	No critical technical issues	
	Funding	City Budget	
	Resettlement Requirement	N/A	
Institutional Arrangement	N/A		
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • There shall be some competitions in providing cruising services • 	
Recommendation		<ul style="list-style-type: none"> • The ODT should starts from the market research on the cruising services in Danang City 	

URBAN INFRASTRUCTURE AND UTILITIES

Ut-13

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by DC (6 th Power Development Master Plan)	
Title of Project / Program		Promotion of new power generation plants	
Objectives		<ul style="list-style-type: none"> To establish sufficient and stable power supply in 2025 and relieve power shortage. 	
Outline	Period	2016 - 2025	
	Location	Around Danang city	
	Beneficiaries (target group)	All the subscribers in central region	
	Sub Components	<ul style="list-style-type: none"> Feasibility studies for the plants Invest and construction of the plants and transmission line Operation the plants and transmission line 	
	Plan and Layout		
	Operation and Management	EVN	
	Cost (investment, recurrent)	100 million USD	
	Revenue (if any)		
	Rationale	<p>According to the 6th power development master plan and demand projection by the DaCRISS team, demand was forecasted to increase 7-8% annually. This figure is higher than the average of the central region. However, this volume increase will be covered by the development of power plants proposed in the master plan mentioned above. So EVN and related organization needs to follow the schedule proposed in the master plan in order to cope with power demand increase. Furthermore, the participation for the large scale IPPs is said to be limited, IPPs shall be promoted since almost 30 % of power is expected to purchase from IPPs. 2 hydropower plant is planned around Danang city.</p>	
Implementation	Agency	EVN or Danang power company	
	Planning Requirement	Barrier for IPPs shall be removed.	
	Funding	EVN or private investor	
	Resettlement Requirement	Based on the nature of the original projects. It may require in case of hydropower plants planned nearby Danang.	
	Institutional Arrangement	<ul style="list-style-type: none"> Arrangement for investment and EIAs are required. 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> Investment fund for the development Enough capacity for conducting projects since the time for the project is short and number of the project is also going to increase rapidly Barrier for large scale investor. 	
Recommendation		<ul style="list-style-type: none"> Promotion of Investment fund Recruit qualified staff and conduct human resource development for implementation of many projects. 	

Ut-14

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by ST	
Title of Project / Program		Supplemental upgrade power transmission and distribution network (substation and network - Compact Cable Box)	
Objectives		<ul style="list-style-type: none"> • Ensuring stable power supply for demand increase in newly developing area • To decrease maintenance opportunity by introducing underground cable • Improve landscape obstacles 	
Outline	Period	2016 - 2025	
	Location	New development area in Danang City	
	Beneficiaries (target group)	Subscribers in Danang City	
	Sub Components	<ul style="list-style-type: none"> • Construction of additional 500kV substation • Construction of Transmission network(500kV/220kV/110kV) • Construction or capacity enhancement of 220kv/ 110kV substations • Construction of distribution network 	
	Plan and Layout		
	Operation and Management	Danang City Power Company	
	Cost (investment, recurrent)	100 million USD	
	Revenue (if any)	Fee for power consumption from the beneficiaries	
	Rationale	Power consumption was estimated to increase more than 7% annually. Peak demand for the power would be estimated 1,300Mw in 2025, while capacity might be developed 500 MW in 2015. All the power supply and distribution network including 500 KV substation, transmission line and low voltage network should be upgraded in this project period.	
Implementation	Agency	Danang power company and EVN	
	Planning Requirement	Site selection, feasibility studies and detailed designs were needed	
	Funding	EVN or low interest loan from international partners	
	Resettlement Requirement	It may happen if new sites for substation was selected	
	Institutional Arrangement	EIA might be requested if the site area is larger.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Project duration seems relatively short, since rapid growth was anticipated. • Capacity of the implementation for the project needs to be strengthened 	
Recommendation		<ul style="list-style-type: none"> • Construction components needs to be identified and formulated in next 5 years development plans. • Coordination of the other projects related to power sector development. 	

Ut-15

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by ST	
Title of Project / Program		Introduction of solar power production	
Objectives		<ul style="list-style-type: none"> • To develop clean energy source for decreasing carbon emissions • To contribute to supplement of hydropower production in dry season. Target might be 5% of peak power production 	
Outline	Period	2016 - 2025	
	Location	In and around area of DaNang	
	Beneficiaries (target group)	Subscribers of the solar panel installation	
	Sub Components	<ul style="list-style-type: none"> • Formulate and legislate a support system for renewable energy Comprehensive supporting measures might be for introduced for solar power production effectively as described below. Basic principles are the feed in tariff system, premium tariff and equal burden sharing between investor and power purchaser. • Subsidy for introducing solar panel Factory (whose roof is large enough for equipping solar) and tourism industry might be selected as partner, since they may enjoy low cost of power consumption and would like to have environmental friendly images. In addition, both of them would be assisted by having as an emergency measures for power supply. Subsidy rate are required to set for investors to relieve their long time recovery of their investment. • Purchase generated power at certain price There is a system to purchase power from Independent power plants. This system might apply for the beneficiaries of this project also. Purchasing power tariff needs to be set for small scale IPPs and selling meter also needs to be installed. 	
	Plan and Layout		
	Operation and Management	Power Company No3	
	Cost (investment, recurrent)	50 million USD	
	Revenue (if any)		
	Rationale	<p>It is said that selling price of solar power can decrease and meet market price in 2010 – 2012 through technological innovation and price reduction of due to mass production of solar panel.</p> <p>In addition, Solar power in Vietnam might be more feasible compared with developed countries because of its geological location.</p> <p>Solar power has an advantage in several aspects. Those are less carbon emission at operation, coincidence of peak demand time, complementary relationship with hydro power system.</p> <p>Introduction of solar panel might relieve power shortage in supply and distribution.</p> <p>On the contrary, there are also disadvantages of the solar power. It is said that those are high initial investment, relatively small capacity and fluctuation by weather condition. Those can be complemented the other source like hydro power. One of</p>	

		the reason why less solar power is not promoted the country is lack of financial assistance scheme for investor.
Implementation	Agency	EVN, Danang power company
	Planning Requirement	Below.
	Funding	EVN or introduction of CDM mechanism might be feasible.
	Resettlement Requirement	None
	Institutional Arrangement	<ul style="list-style-type: none"> • Subsidy or preferences for installing facilities are required since it takes long period to recover the investment amount. • A power company need to have close customer relations, since more number of small scale investor is coming.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Solar power promotion in the south region might advance since potential is higher than the central region.
Recommendation		<ul style="list-style-type: none"> • Monitoring the progress of innovation for solar panel • Setting up purchasing power and subsidy for small scale investor

Ut-16

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by ST	
Title of Project / Program		Introduce renewable power production	
Objectives		<ul style="list-style-type: none"> • Develop clean energy source and carbon emissions • Contribute to relieve power shortage in future 	
Outline	Period	2016 - 2025	
	Location	In and around area of Danang	
	Beneficiaries (target group)	All the beneficiaries of Vietnam	
	Sub Components	<ul style="list-style-type: none"> • Feasibility study for wind power production It was studied that wind is a prospective renewable power source in Vietnam. However the study did not include location, physical plant, transmission plan and arrangement for IPPs to easy to invest and operate. There is also a potential area for the wind power in and around Danang city. A feasible plan including investment and operation shall be formulated. • Arrangement for the wind power plant If private companies could construct and operate those wind power production, it is better to have a certain system for them to operate in order to save human resources of EVN. • Experimental test for the other sources of power production The other sources might be not feasible at this moment. Those are the biomass, ocean thermal, geothermal. However, those energy can be planned in the long run according to the innovation of the technology or scheme among international agreement. 	
	Plan and Layout		
	Operation and Management	EVN or private investor	
	Cost (investment, recurrent)	3.3 million USD	
	Revenue (if any)	increase in promotion with power consumption	
	Rationale	The 6 th national power development plan proposed to construct power stations in the central region. In this master plan hydropower and thermal power is projected to be a main source of the power, while renewable energy can not be a major power source, because each of them have their own constraint. Those are capacity, cost performance technical problems and so on. However, renewable energy might be promoted for the environmental purpose This project is aiming at developing renewable energy by using CDM and others.	
	Implementation	Agency	EVN or Investor
Planning Requirement			
Funding		EVN or CDM mechanism might be feasible.	
Resettlement Requirement		None.	
Institutional Arrangement		<ul style="list-style-type: none"> • Subsidy for facilities are required long span duration is required. • Danang power company might have more close customer service. 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Feasible power source is limited. • Less incentive for investor 	
Recommendation		<ul style="list-style-type: none"> • Cooperation with environmentally active organization. 	

Ut-21

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by DC	
Title of Project / Program		Water resource development at Cu De River (Danang water supply project)	
Objectives		To reserve necessary water resource for coping with water demand increase through expansion of service area and increase unit consumption rate.	
Outline	Period	2016 - 2025	
	Location	Upstream of Cu De River	
	Beneficiaries (target group)	Especially citizens living in the north west area of the Danang City	
	Sub Components	<ul style="list-style-type: none"> • Pre-feasibility study for new water resources including remote sensing survey, • Feasibility study for Cu De River water resource development • Development of reservoir upper stream of Cu De river • Introduction of Integrated monitoring and control system (SCADA) • Operation 	
	Plan and Layout		
	Operation and Management	Danang Water Supply Company	
	Cost (investment, recurrent)	50.0 million USD, Loan Agreement	
	Revenue (if any)	Water usage	
	Rationale	<p>Currently, Cam Le river is a main source for water supply in the Danang city. Danang Water Supply company has operated two purification plants at Cau Do and SanBay by using water from the Cam Le River. However, it is reported that this resource has affected saline ingredient in dry season and discharge from irrigation area and industrial area from upwards</p> <p>In addition, water demand is projected to increase through increase population coverage and unit consumption. That is the reason why a water resource with certain amount needs to be exploited.</p>	
	Implementation	Agency	DWSC, DOC,
Planning Requirement		• Environmental Impact Assessment shall be done,	
Funding		ADB (technical assistance 1.5 million USD)	
Resettlement Requirement		Residents along Cu De river, candidates will be selected by feasibility study and water conveyance pipeline and water treatment plant may require the resettlements	
Institutional Arrangement		<ul style="list-style-type: none"> • Needs to discuss water resource management • Forests in the catch-ment area should be preserved. 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Water resource management • Environmental impact assessment 	
Recommendation		<ul style="list-style-type: none"> • A consultants firm is selected for a feasibility study, a study needs to conducted smoothly. • Protection for the existing water resource to be enhanced. 	

Ut-22

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Implemented by USP	
Title of Project / Program		Improve water loss in the existing network	
Objectives		<ul style="list-style-type: none"> • Decrease physical water loss to increase efficiency and maximize water resources 	
Outline	Period	2016 - 2025	
	Location	All the facilities in the supply network	
	Beneficiaries (target group)	All the users	
	Sub Components	<ul style="list-style-type: none"> • Equip meters and introduction of integrated monitoring system • Improvement of house connection 	
	Plan and Layout		
	Operation and Management	DWSC	
	Cost (investment, recurrent)	6.0 mil USD	
	Revenue (if any)		
	Rationale	<p>It is said that ratio of non revenue water was more than 40 % in 2006. This rate is relatively high compared with the other water supply system all over the world. The main source of the non revenue water was said to be physical loss. Over-aged pipes and connections between houses are suspicious. It needs to equip more water meters and monitoring system in order to identify the exact location and volume. According to these leakage, the company could not operate the network with high water pressures. As a result, the area far from the main pipeline have not enough access to water supply in terms duration of the service, water quantities and qualities. Through the USP, DWSC could succeeded to decrease water loss from 40% to 36%. Although USP would complete 2010, these kinds of activity should be continued.</p>	
Implementation	Agency	DWSC, ORIO	
	Planning Requirement	<ul style="list-style-type: none"> • Synchronization between development plan and capacity development for DWSC • Capacity development for the technical staff also needed 	
	Funding	Netherlands	
	Resettlement Requirement	None.	
	Institutional Arrangement	<ul style="list-style-type: none"> • None 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • fund 	
Recommendation		<ul style="list-style-type: none"> • Under implementation • Continuing the project • Lessons learnt shall be reflected to the following activities 	

Ut-23

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by ST	
Title of Project / Program		Expand service area for newly development area	
Objectives		• To improve safe water access to newly development area	
Outline	Period	2016 - 2025	
	Location	Peri-urban area and newly development area	
	Beneficiaries (target group)	All the resident in the target area	
	Sub Components	• Construction of the additional network	
	Plan and Layout(Image)		
	Operation and Management	DOC, DWSC	
	Cost (investment, recurrent)	350 million USD	
	Revenue (if any)		
	Rationale	New urban development was planned in the master plan. Supply area should be expanded accordingly to increase demand. .	
Implementation	Agency	DOC, DWSC	
	Planning Requirement	<ul style="list-style-type: none"> • A network should be expanded according to water resource development proposed in the proposed project mentioned above. • Network shall be planned in coordination with road plan. It is recommended to introduce common utility duct after the financial and economical evaluation. The common utility duct should be planned together with sewerage, power and telecommunications. • Staged development is required. 	
	Funding	DWSC, DOC, Developer	
	Resettlement Requirement	<ul style="list-style-type: none"> • Since almost all the supply network pipe is submerged under the road, resettlement issues shall be handled by road development project except plants or pumping station. 	
	Institutional Arrangement	<ul style="list-style-type: none"> • Developer, DOC, DOT and related organization concern with common utility duct 	
Critical Factors / Conditions for Success		• Investment fund	
Recommendation		•	

Ut-24

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by PIIP	
Title of Project / Program		Waste water treatment system development	
Objectives		<ul style="list-style-type: none"> • Improvement of water environment including public water and ground water • Improvement sanitary condition 	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	Inhabitants living in the target area	
	Sub Components	<ul style="list-style-type: none"> • Development separated waste water system in Danang • Development of four waste water treatment plants • Improvement of current system • Development of SCADA system • Connection to the sewer pipe from the beneficiaries • Capacity Development of technical and administrative staff 	
	Plan and Layout		
	Operation and Management	TMDC	
	Cost (investment, recurrent)	47.3 mil USD (until 2020) 68.7 mil USD (until 2030) 120.1 mil USD (until 2040)	
	Revenue (if any)		
	Rationale	PIIP proposed waste water treatment strategy in Danang city. After revision of the population framework, DaCRISS recommended to conduct proposed actions to improve water environment..	
	Implementation	Agency	DONRE, DOT, TMDC
Planning Requirement		<ul style="list-style-type: none"> • Phasing out of septic tank • Proper tariff setting • Proper population demand projection • Phased development was required 	
Funding		DPC, ODA,	
Resettlement Requirement		None	
Institutional Arrangement		• Tariffs setting require DPC approval.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Fund source • Connection to the sewer pipe from individual house • Differences of population projection 	
Recommendation		<ul style="list-style-type: none"> • Formulation of the implementation plan • Finding a fund source • Reflecting DaCRISS population projection to the plan 	

Ut-30

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by ST	
Title of Project / Program		Promotion of septic tank in rural area	
Objectives		<ul style="list-style-type: none"> • Improvement of water environment in rural area • Improvement of sanitary condition in rural area 	
Outline	Period	2016 - 2025	
	Location	Rural Area	
	Beneficiaries (target group)	People in the rural area.	
	Sub Components	<ul style="list-style-type: none"> • Installation of septic tank for each household or small scale waste water treatment system in the area • Establishment of night soil collection system in the rural area 	
	Plan and Layout		
	Operation and Management	URENCO, TMDC	
	Cost (investment, recurrent)	6.4 million USD	
	Revenue (if any)		
	Rationale	Waste water from the rural area had not caused serious pollution at this moment. The population in the current rural area was projected to drastically increase. Some area might be covered by the central sewerage system according to the urbanization, while hilly area and low density area will not be covered with the system. Independent small scale of treatment (by small commune or each household) shall be introduced preventing the public water pollution.	
Implementation	Agency	TMDC or URENCO, DOT, DONRE	
	Planning Requirement	<ul style="list-style-type: none"> • Type of the small scale treatment system shall be decided. • Selection of target areas • A monitoring for the waste water treatment facility might be required. • Night soil treatment facility and equipment might be required. 	
	Funding	DPC, ODA technical cooperation,	
	Resettlement Requirement	None	
	Institutional Arrangement	<ul style="list-style-type: none"> • Coordination among DOT, DARD and DONRE is required. 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Fund source, Operation cost, 	
Recommendation		<ul style="list-style-type: none"> • Reflecting population projection to the plan 	

Ut-32

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by ST	
Title of Project / Program		Establishment of industrial waste water treatment system	
Objectives		• Enhancement of pretreatment in the industrial zone or factory	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	Industrial waste water discharger and water users.	
	Sub Components	<ul style="list-style-type: none"> • Promotion and enforcement of pretreatment for factories • Development of waste water treatment plant in the industrial zones • Capacity development for the operator in the factory • Monitoring and inspection for the waste water treatment 	
	Plan and Layout		
	Operation and Management	URENCO, DONRE	
	Cost (investment, recurrent)	20 million USD	
	Revenue (if any)		
	Rationale	<p>Only one out of seven Industrial zone owned waste water treatment facility. So the establishment of the system is a critical issue. Factory might discharge various type of waste water. It is thus, difficult for the government to develop and operate various customized type of waste water treatment facilities. A principle is that polluter shall treat waste water up to domestic waste water level.</p> <p>Enhancement the regulation, assist operation of factory and monitoring by DONRE shall be established as an system.</p>	
Implementation	Agency	DONRE, URENCO	
	Planning Requirement	• Legal	
	Funding	DPC, ODA technical cooperation,	
	Resettlement Requirement	None	
	Institutional Arrangement	• DPC, DONRE, URENCO	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Some investor might have consensus with DPC about environmental standard discharge, • Human resource development for the monitoring team is required. 	
Recommendation		• A survey shall be conducted for all the factories.	

Ut-37

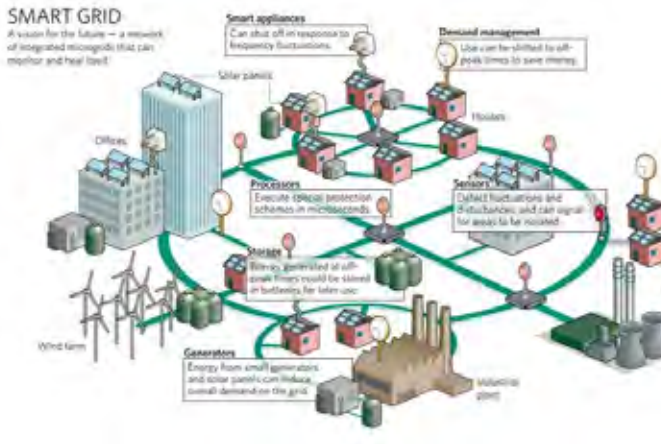
Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc.	G1
Nature of Project		Proposed by ST	
Title of Project / Program		Introduction of intermediate treatment system for domestic waste	
Objectives		<ul style="list-style-type: none"> • To decrease volume for final dumping in order to prolong Khanh son landfill site • To increase rate for recovery(reuse and recycle) from the domestic wastes 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	All the domestic solid waste dischargers	
	Sub Components	<ul style="list-style-type: none"> • Feasibility study for introducing intermediate treatment • Construction of the treatment plant • Introducing new collection system(procurement of trucks, bins) • Capacity building for URENCO staff 	
	Plan and Layout		
	Operation and Management	URENCO, DONRE,	
	Cost (investment, recurrent)	110 million USD	
	Revenue (if any)		
	Rationale	<p>Once collection and treatment system for the domestic waste was established with support of World Bank. Currently URENCO is operating the system very well and increase the collection rate. The introduced treatment measure is simple sanitation landfill, so that the rate of material recycle or thermal recovery is not high. In addition, volume for the final treatment is expected to increase since population and unit rate may increase, while landfill site capacity is limited. Therefore introduction of intermediate treatment and decrease amount of final treatment would have high priority.</p> <p>First, reuse, material recycle and chemical recycle should be taken into account. Thermal recovery is a final selection for intermediate treatment. A lifecycle assessment shall be done in the course of the study.</p>	
Implementation	Agency	DONRE, DOC	
	Planning Requirement	<ul style="list-style-type: none"> • Source separation, collection and final treatment should be planned comprehensively. • Evaluation for the plan should be done with environmental recovery and financial aspects. 	
	Funding	DPC, ODA loan	
	Resettlement Requirement	Resettlement depends on the site selection for the treatment facility. Social consideration for scavenger might be necessary.	
	Institutional Arrangement	• A new tariff should be approved by DPC	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Plan and change to new system might request dynamic social change. Synchronization with 3 R project is recommendable. 	
Recommendation		<ul style="list-style-type: none"> • Conduct a feasibility study 	

Ut-38

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc. Improve operation and management mechanism	G1 G2
Nature of Project		Proposed by ST	
Title of Project / Program		Enhance industrial waste management	
Objectives		<ul style="list-style-type: none"> • Establish a system to treat industrial waste • Increase collection rate 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	All the solid waste collection discharger	
	Sub Components	<ul style="list-style-type: none"> • A feasibility study for new collection and treatment system • Enforcement and monitoring system shall be established. • Capacity building for DONRE and URENCO staff • A monitoring can be proposed in the project. 	
	Plan and Layout		
	Operation and Management	URENCO, DONRE	
	Cost (investment, recurrent)	5 million USD	
	Revenue (if any)		
	Rationale	Currently, there are no effective treatment was established for the industrial waste, even though some company designated by the DPC to correct industrial waste by contract basis. Collected waste was supposed to combined with domestic waste. There is no statistical data available in the city. Establishment of industrial waste was high priority to be challenged. Different treatment or method might be proposed according to the type of materials. Those are Sludge, Oils, Acids, Alkalis, Metals, rubbers and glasses.	
Implementation	Agency	DONRE, URENCO,	
	Planning Requirement	<ul style="list-style-type: none"> • Treatment, collection and final treatment should be planned comprehensively. • Evaluation for the plan should be done with environmental recovery(life cycle assessment) and financial aspects. • Enhancement pre treatment obligation for the discharger • Some waste might be appropriate for recycle. Those should be handled with care. • Waste from constructions and sludge from the plant can be recycled. • Private company might be included for implementation like collection. 	
	Funding	DPC, ODA loan, private funds	
	Resettlement Requirement	Resettlement depends on the site selection for the treatment facilities.	
	Institutional Arrangement	<ul style="list-style-type: none"> • A new tariff should be approved by DPC • If a type of waste can be recycled as industrial material, a new industrial standard for the material shall be required. 	
Critical Factors / Conditions for Success		Accountability for the factory is required	
Recommendation		A survey for the current industry or factory is required.	

Ut-39

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Develop efficient and effective supply network and facilities including water supply, power, telecommunications, drainage and sewerage, solid waste management, etc. Improve operation and management mechanism	G1 G2
Nature of Project		Proposed by DC	
Title of Project / Program		Recycle of construction waste	
Objectives		<ul style="list-style-type: none"> • Establish a system to collect construction waste • Increase rate of construction waste recycle 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	Construction companies	
	Sub Components	<ul style="list-style-type: none"> • Market research and feasibility study for recycling • Construction of transition post and recycle center • Introduction of enforcement measures for construction companies • Capacity building for DONRE and URENCO staff • Capacity building for construction workers 	
	Plan and Layout		
	Operation and Management	URENCO	
	Cost (investment, recurrent)	0.4 million USD	
	Revenue (if any)		
	Rationale	This project is a supplemental project for industrial waste recycling. Construction demand and materials forecasted to be high in the Danang city, as the development of the vast area and redevelopment was planned.	
Implementation	Agency	DONRE, URENCO,	
	Planning Requirement	<ul style="list-style-type: none"> • Treatment, collection and final treatment should be planned comprehensively. • Evaluation for the plan should be done with environmental recovery(life cycle assessment) and financial aspects. • Enhancement of source separation and pre treatment obligation for the discharger • Private company might be included for implementation like collection. 	
	Funding	DPC, ODA loan, private funds	
	Resettlement Requirement	Resettlement depends on the site selection for the treatment facilities.	
	Institutional Arrangement	<ul style="list-style-type: none"> • Tariff shall be set and approved by DPC • If a type of waste can be recycled as industrial material, a new industrial standard for the material shall be required. 	
Critical Factors / Conditions for Success		Accountability for the factory is required	
Recommendation		A survey for the current industry or factory is required.	


Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Improve operation and management mechanism	G2
Nature of Project		Proposed by ST	
Title of Project / Program		Smart Grid (integrated control system among power generation/ transmission facilities)	
Objectives		<ul style="list-style-type: none"> • Establish more reliable supply system with redundancy • To monitor and identify troubles happened on the network, quickly eg. Type, location, seriousness of trouble quickly. • Easily to monitor since number of stakeholder may increase such as small scale power plant 	
Outline	Period	2016 - 2025	
	Location	All the facilities of transmission, power generation and large scale consumer	
	Beneficiaries (target group)	All the subscribers in Vietnam	
	Sub Components	<ul style="list-style-type: none"> • Feasibility study for Smart Grid or integrated control system of Vietnam Model • Introduction of Integrated system for power control system • Operation 	
	Plan and Layout	 <p>Source: Technews, tinycomb.com</p>	
	Operation and Management	EVN and each operator(participated in the supply network)	
	Cost (investment, recurrent)	10 million USD	
	Revenue (if any)		
	Rationale	<p>One of the Issues to be challenged in the power sector in Vietnam is to decrease energy loss and supply qualified power through the supply network from generation to distribution stage. In the 6th power development master plan, a target for the energy loss is indicated to less than 9%.</p> <p>In 2008, EVN reported that energy loss in the nationwide is decreased to below 10% for the first time. However, increase of the power transmission line and substation might complicate energy control system in Vietnam even though the adjustment or coordination among related facilities is weak. Therefore a smart grid or integrated control system would contribute to stable supply and identify power loss.</p>	
	Implementation	Agency	EVN
Planning Requirement		• A system should be introduced in the nationwide.	
Funding		EVN or some fund	
Resettlement Requirement		None	
Institutional Arrangement		<ul style="list-style-type: none"> • An agreement would be required between EVN and IPPs and subscribers • Enforcement 	

Critical Factors / Conditions for Success	<ul style="list-style-type: none">• Investment fund for equipment• A concept and detailed framework for the system needs to be established.
Recommendation	<ul style="list-style-type: none">• Monitor the progress of introduction of smart grid in the other countries

Ut-46

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Improve operation and management mechanism	G2
Nature of Project		Implemented by Netherlands	
Title of Project / Program		Utility Support Programme (USP)	
Objectives		<ul style="list-style-type: none"> • Enhance operational and financial performance of DWSC. • Reduction of Non-revenue water through physical loss in the network 	
Outline	Period	2016 - 2025	
	Location	DWSC head quarters and customer relation office	
	Beneficiaries (target group)	DWSC	
	Sub Components	<ul style="list-style-type: none"> • Qualify control for both production and distribution • Administration improvement • Customer relation improvement • Capacity building for DWSC staff • Strategic management and master planning 	
	Plan and Layout		
	Operation and Management	DWSC	
	Cost (investment, recurrent)	2.7 million Euro	
	Revenue (if any)	Increase of revenue is anticipated according to the improved customer relations.	
	Rationale	The necessity of the improvement of operation and physical facilities was proved by the fact that non –revenue water exceeded 40% in 2006. Physical loss was suspected to be the main reason since water pressure was forced to regulate in order not to increase water leakage.	
Implementation	Agency	DWSC	
	Planning Requirement	Active participation from DWSC	
	Funding	Netherlands (Vitens)	
	Resettlement Requirement	None.	
	Institutional Arrangement	•	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Details of non revenue water are not clear. Water loss might be a social problems. • Electricity supply problems can be a major problems of quality of water 	
Recommendation		<ul style="list-style-type: none"> • continue the activities and dissemination the achievement to whole city of Danang 	

Ut-47

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Improve operation and management mechanism	G2
Nature of Project		Proposed by ST	
Title of Project / Program		Integrated Water Resource Management	
Objectives		<ul style="list-style-type: none"> • Conduct water resource management with the consensus among stakeholders • Promote more effective and efficient use taking into account seasonal fluctuation and purposes • Introduction for preserving and protecting measures for water source 	
Outline	Period	2013 - 2015	
	Location	The Vu Gia Thu Bon river basin (10,350km ²), encompassing both Quang Nam Province and a part of Danang Municipality	
	Beneficiaries (target group)	Water users in the area,	
	Sub Components	<ul style="list-style-type: none"> • Establishing IWRM committee and set up coordination function • Development of GIS system by using water and land-use data processed by remote sensing in order to grasp potential of water resources • Development of monitoring system (water level indicators at reservoirs and water intakes) for coordination 	
	Plan and Layout	 <p style="text-align: center;">Vu Gia Thu Bon River Basin</p>	
	Operation and Management	Possibly DONRE Quang Nam (Needs coordination)	
	Cost (investment, recurrent)	2.6 million USD	
	Revenue (if any)	No	
	Rationale	Water is a limited natural source for multi purpose such as irrigation, daily-life, industry and electricity etc. Surface water running river is major source for supplying. Furthermore flood protection is also an issue related to water. However, there is no water coordination system for exploitation and operation among different related organizations, users and neighboring administrations.	
Implementation	Agency	DONRE Quannam(needs to coordinate among stakeholders)	
	Planning Requirement	Active participation from related organization and users.	
	Funding	Netherlands (Vitens)	
	Resettlement Requirement	None	
	Institutional Arrangement	<ul style="list-style-type: none"> • DONRE, MARD, DOC, DOIT, Water users, in each district. 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Coordination among stakeholders may be a tough job since number of stakeholder is large • There is no rule or regulation to coordinate water rights 	
Recommendation		<ul style="list-style-type: none"> • Setting up IWRM committee first 	

Ut-50

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Improve operation and management mechanism	G2
Nature of Project		Proposed by ST	
Title of Project / Program		Increase rate for the connection and enhance the night soil treatment	
Objectives		<ul style="list-style-type: none"> • Increase effectiveness of waste water treatment • 	
Outline	Period	2016 – 2025	
	Location	Danang City	
	Beneficiaries (target group)	All dischargers in the target area	
	Sub Components	<ul style="list-style-type: none"> • Promotion of connection to the sewer pipe from the household • night soil treatment collection and treatment (For the time being), 	
	Plan and Layout		
	Operation and Management	TMDC, URENCO	
	Cost (investment, recurrent)	10.5 million USD	
	Revenue (if any)		
	Rationale	<p>Low rate of connection to the drain is the one of the cause that low performance of the treatment plants. Promotion for connection is crucial for effective operation of the plants.</p> <p>After completion of the current sewerage system, night soil collection and treatment phased out by abolishment of subsidy for the night soil collection companies. However, still there exist demands until all the houses connecting to the sewer. For the time being, night soil treatment shall be functioned.</p>	
Implementation	Agency	DONRE, DOT, TMDC, URENCO	
	Planning Requirement	<ul style="list-style-type: none"> • Criteria for the waste water treatment approach for each area needs to set under coordination among development of separated sewer system, connection to the integrated drainage system and conventional septic tank system. Both enforcement and guidance for the users shall be introduced • Night soil treatment shall be planned to simple since it might phase out. • Avoiding double investment. 	
	Funding	DPC, ODA technical cooperation, ODA Loan	
	Resettlement Requirement	None	
	Institutional Arrangement	<ul style="list-style-type: none"> • Policy shall be coordinated among DOT, DONRE, 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Fund source for operation • Coordination among stakeholders 	
Recommendation		<ul style="list-style-type: none"> • 	

Ut-51

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Improve operation and management mechanism	G2
Nature of Project		Proposed by ST	
Title of Project / Program		Integrated solid waste management among local authorities	
Objectives		<ul style="list-style-type: none"> • Efficient waste recycle by gathering a certain amount from neighboring local authorities • Construction of new landfill sites shall substitute for Khanh son lanfill site after their role end. 	
Outline	Period	2013 - 2015	
	Location	Danang City, Quang Nam, Hue, and so on.	
	Beneficiaries (target group)	All the solid waste collection discharger	
	Sub Components	<ul style="list-style-type: none"> • Waste management committee organized • Selection for new final dumping site • Coordination for new treatment method 	
	Plan and Layout		
	Operation and Management	URENCO, DONRE (including neighboring provinces)	
	Cost (investment, recurrent)	0.6 million USD	
	Revenue (if any)		
	Rationale	<p>There are cases that a certain amount is required for efficient intermediate treatment. For example if RDF(refuse derived fuel). is planned to introduce, the final treatment plant can be combined one from 3 provinces. Once various type of treatment should be introduced for the industrial waste, this burden can be shared with local authorities.</p> <p>Furthermore, Khanh Son landfill site is expected to end their role during 2015 to 2020. A new final dumping site might be selected and facility needs to be completed by that time. This site selection can be also jointly studied.</p>	
Implementation	Agency	DONRE, URENCO, (Danang, Hue , Quannam)	
	Planning Requirement	<ul style="list-style-type: none"> • This project shall be conducted in line with industrial waste enhancement and introduction of intermediate treatment for domestic waste. 	
	Funding	DPC, ODA loan, private funds	
	Resettlement Requirement	Resettlement depends on the site selection for the final dumping site. Mitigation measures for environmental impact for neighbors shall be taken into account.	
	Institutional Arrangement	A agreement among all neighboring local authorities shall be required related to role and responsibility sharing.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Coordination may take a long term 	
Recommendation		<ul style="list-style-type: none"> • Conduct a feasibility study 	

Ut-52

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Improve operation and management mechanism	G2
Nature of Project		Proposed by ST	
Title of Project / Program		Implementation plan for solid waste management	
Objectives		<ul style="list-style-type: none"> • Smooth implementation of the solid waste management master plan 	
Outline	Period	2013 - 2015	
	Location	Danang City	
	Beneficiaries (target group)	All the solid waste discharger	
	Sub Components	<ul style="list-style-type: none"> • Advise to DONRE to conduct policy making for solid waste management • A feasibility study for intermediate treatment and final dumping site • Enhance monitoring and supervision activity for the company engaged in the solid waste management • Capacity Development for DONRE staff 	
	Plan and Layout		
	Operation and Management	DONRE	
	Cost (investment, recurrent)	0.6million USD	
	Revenue (if any)		
	Rationale	<p>DONRE has lacking technical resource for policy making as well as monitoring activity for the private company engaged in the solid waste management.</p> <p>Once the orientation and framework was established in the study, it is crucial to make decision from the technical, financial and political view points.</p>	
Implementation	Agency	DONRE	
	Planning Requirement	<ul style="list-style-type: none"> • Feasibility study for intermediate treatment • Determination of the intermediate treatment method • Coordination of the related stakeholders • Enough number of staffs shall be recruited by DONRE 	
	Funding	DPC, ODA technical cooperation,	
	Resettlement Requirement	None	
	Institutional Arrangement	DONRE, DPC	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Fund source, technical cooperation 	
Recommendation		<ul style="list-style-type: none"> • Finding international partners 	

Ut-54

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Promote user-paying principle / Awareness for saving consumption	G3
Nature of Project		Proposed by ST	
Title of Project / Program		Awareness campaign for saving energy consumption	
Objectives		<ul style="list-style-type: none"> • Promote awareness to power saving and environment protection • Promotion of environmental education 	
Outline	Period	2016 – 2025	
	Location	Danang City	
	Beneficiaries (target group)	All the subscribers (Commune, school, large scale consumer, community groups)	
	Sub Components	<ul style="list-style-type: none"> • Awareness campaign to the people and large scale consumer For example, awareness includes promotion of energy saving housing model, dissemination of energy saving equipments and practical way to save energy consumption. Media for promotion might be selected based on the efficiency and effectiveness for the target group. • Environmental education at school level and commune level Environmental education covers principle of comprehensive environment issues like natural environmental protection and global warming. Furthermore, practical issues related to power sector for the environment are also covered in the class. Issues are recycling, energy saving and natural resource protection and so on. • Introducing a subsidy mechanism for low power consumption equipment LED, fluorescent tube lamp are recognized as low consumption equipments compared with incandescent lamp. Introduction of those kinds of equipment is feasible because of their low operation cost and long life even though initial price is high. If we introduce 1million of fluorescent tube-light, the consumption of those light is almost equivalent to 30MW, whose capacity is close to hydro power plant planned and constructed near Danang. In addition, promotion of the other type of equipment might be considered like air conditioner, microwave and etc. These activities might be more effective if introduced in a nationwide. 	
	Plan and Layout		
	Operation and Management	EVN, DOI, DONRE	
	Cost (investment, recurrent)	2.6 million USD	
	Revenue (if any)		
	Rationale	Since the power consumption growth is rapid and it takes a certain period to develop a new power plant and supply network, it would be effective to take action in order to delay demand increase. Awareness campaign and introduction of the low consumption equipment is worth to do.	
	Implementation	Agency	EVN,DOET, DONRE
Planning Requirement		<ul style="list-style-type: none"> • Promotion activity might be programmed with the other sector awareness campaign related to environment. • Comprehensive promotion approach would be established. 	
Funding		Potentially EVN or environmental fund for the promotion	
Resettlement Requirement		None	
Institutional Arrangement		<ul style="list-style-type: none"> • Needs to arrange with DOET for school environmental education programme 	

Critical Factors / Conditions for Success	<ul style="list-style-type: none">•.Subsidy mechanism shall require a human resource to conduct.
Recommendation	<ul style="list-style-type: none">•Formulate comprehensive environmental education with stakeholders

Ut-55

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Promote user-paying principle / Awareness for saving consumption	G3
Nature of Project		Proposed by ST	
Title of Project / Program		Promotion of small scale rainwater catchment system	
Objectives		<ul style="list-style-type: none"> • To decrease actual water consumption from the centralized water supply system • To contribute water source conservation by maximize available natural resources in the city 	
Outline	Period	2016 - 2025	
	Location	<ul style="list-style-type: none"> • Danang City, Public facilities and factory with large roof (station, eg) is prospective 	
	Beneficiaries (target group)	All the subscribers in Vietnam	
	Sub Components	<ul style="list-style-type: none"> • Set up a system for subsidy or preference for rainwater use system • Promotion of rain water system in public facilities • Groundwater protection by infiltration (seepage pit) 	
	Plan and Layout		
	Operation and Management	Each firm introducing the system	
	Cost (investment, recurrent)	0.5 million USD	
	Revenue (if any)		
	Rationale	Water consumption is projected to be tripled in 2025, saving consumption or delay increase is a one major issues to relieve rapid growth of the consumption and decrease investment cost and impacts. Rainwater is one of the resources which can be easily used.	
Implementation	Agency	DOC	
	Planning Requirement	<ul style="list-style-type: none"> • Financial and ecological aspects should be evaluated. • Hydrological environment shall be considered 	
	Funding	DWSC, DOC or Environmental fund from international partners	
	Resettlement Requirement	None.	
	Institutional Arrangement	<ul style="list-style-type: none"> • Subsidy from the government 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Investment fund for subsidy • Water usage standard for rain water 	
Recommendation		<ul style="list-style-type: none"> • Cost and economical analysis shall be done. 	

Ut-56

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Promote user-paying principle / Awareness for saving consumption	G3
Nature of Project		Proposed by ST	
Title of Project / Program		Awareness campaign for conserving water	
Objectives		<ul style="list-style-type: none"> • Promote awareness to water saving • Promotion of Environmental education 	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	All the water users (Commune, School, large scale consumer, Community groups)	
	Sub Components	<ul style="list-style-type: none"> • Awareness campaign to the people and large scale consumer For example, promotion of water conserving equipments water source protection activity and efforts for water saving by consumer. Media for promotion might be selected based on the efficiency and effectiveness for the target group. • Environmental education at school level and commune level Environmental education covers principle of comprehensive environment issues like natural environmental protection and global warming. Furthermore, practical issues for the environment related to water are also covered in the subjects. Issues are water saving and natural resource and water source protection. • Delivery or Information sharing for low water consumption equipment A water saving tap is a low cost device which can save water 10-15%. Delivering this device is one measure for promotion. For the large scale consumer, other equipment shall be taken into account. Water saving type flushing toilet, automatic tap are recognized as efficiency equipments. Those can be promoted as mentioned above. 	
	Plan and Layout		
	Operation and Management	DWSC,DOC, DONRE	
	Cost (investment, recurrent)	2.6 million USD	
	Revenue (if any)		
	Rationale	Since the water consumption growth is rapid and it takes a certain period to develop a new water resource which has a limited capacity. It would be effective to take action in order to delay demand increase. Awareness campaign and introduction of low consumption water usage equipment might contribute to relieve high growth of consumption	
	Implementation	Agency	DWSC, DOC,DOET, DONRE, TV and Newspapers
Planning Requirement		<ul style="list-style-type: none"> • Promotion activity might be programmed with the other sector awareness campaign related to environment. • Comprehensive promotion approach would be established. 	
Funding		Potentially DWSC or environmental fund for the promotion	
Resettlement Requirement		None	
Institutional Arrangement		<ul style="list-style-type: none"> • Needs to arrange with DOET for school environmental education programme 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Human resources are key for conducting a programme 	
Recommendation		<ul style="list-style-type: none"> • Formulate comprehensive environmental education with stakeholders 	

Ut-57

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Promote user-paying principle / Awareness for saving consumption	G3
Nature of Project		Proposed by ST	
Title of Project / Program		Awareness Campaign for waste water treatment	
Objectives		<ul style="list-style-type: none"> • Promote connection to the sewer pipe to drain and phasing out of septic tank • Information sharing related to the waste water treatment system • Understanding for the hydrological circulation 	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	All the water users (Commune, School, large scale consumer, Community groups)	
	Sub Components	<ul style="list-style-type: none"> • Promote connection to the drain/ separated sewer and collection sludge/ night soil from septic tank Connection to the drain and sewer pipe shall be done by users. As mentioned above, the low rate of connection may cause pollution of underground water which was used for potable water in the non water supplied area and rural area. Awareness for the importance of the connection shall be promoted. And after phasing out of the night soil collection service by the government, many septic tank users have not empty the septic tank even though they have not connected drain/sewer. • Environmental education at school level and commune level Environmental education covers principle of comprehensive environment issues like natural environmental protection and global warming. Furthermore, practical issues for the environment related to waste water are also covered in the subjects. Issues are water treatment system and natural resource and water hydrological circulation • Information sharing about waste water treatment system Willingness to pay for the waste water treatment is lowest in the urban utility services, although it is a. So the understanding of the system is important 	
	Plan and Layout		
	Operation and Management	TMDC, URENCO, DOT, DONRE	
	Cost (investment, recurrent)	2.6millionUSD	
	Revenue (if any)		
	Rationale	<p>Since waste water treatment is one of the critical issues to conserve natural environment, education and awareness campaign shall be promoted. The project may increase attention for conserve natural environment including Danang Bay. Practically, number of houses may increase to connect drain/ sewer.</p> <p>Increase willingness to pay for waste water treatment is one issue to be challenged.</p>	
	Implementation	Agency	DWSC, DOC, DOET, DONRE, TV and Newspapers
Planning Requirement		<ul style="list-style-type: none"> • Promotion activity might be programmed with the other sector awareness campaign related to environment. • Comprehensive promotion approach would be established. 	
Funding		Potentially DOT, DONRE or environmental fund for the promotion	
Resettlement Requirement		None	
Institutional Arrangement		• Needs to arrange with DOET for school environmental	

		education programme
Critical Factors / Conditions for Success		• Fund source
Recommendation		• Programme shall be formulated.

Ut-58

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Promote user-paying principle / Awareness for saving consumption	G3
Nature of Project		Proposed by ST	
Title of Project / Program		Tariff setting for solid waste management	
Objectives		<ul style="list-style-type: none"> • Improvement of cost recovery for waste water management operation 	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	TMDC and all the users connected to the system	
	Sub Components	<ul style="list-style-type: none"> • Proper tariff setting for solid waste management • Enhancement of TMDC financial administration • Operation sharing for night soil treatment 	
	Plan and Layout		
	Operation and Management	TMDC, DOT, DPC	
	Cost (investment, recurrent)	0.3million USD	
	Revenue (if any)		
	Rationale	<p>Only the 15% of water price was set as waste water treatment fee(Environmental fee). This amount is insufficient for operation of the overall system. In short, most of the operation cost was subsidized by the government. Consumption volume by the water users was less reflected to the cost sharing. In addition, only limited users have received services according to the low connection rate. People living in the out of service area shall be received night soil collection service.</p>	
Implementation	Agency	TMDC, DOT	
	Planning Requirement	<ul style="list-style-type: none"> • Understanding from the users are required 	
	Funding	DPC, and ODA technical cooperation	
	Resettlement Requirement	None	
	Institutional Arrangement	<ul style="list-style-type: none"> • DWSC is the fee collection organization for environmental fee • DPC needs to approve the new tariff 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Administration and fee collection shall be enhanced • Promotion of connection to the sewer shall be enhanced • This activity shall be conducted in line with overall improvement of operation as mentioned in the WW1 project • Awareness campaign shall be required 	
Recommendation		<ul style="list-style-type: none"> • 	

Ut-59

Subsector		Urban Infrastructure and Utilities	G
Core Strategy		Promote user-paying principle / Awareness for saving consumption	G3
Nature of Project		Revision of DC Project	
Title of Project / Program		Segregate garbage at source and recycle solid waste (3R)	
Objectives		<ul style="list-style-type: none"> • Decrease solid waste volume for final treatment • Increase ratio for recycle and reuse • Increase fee collection ratio 	
Outline	Period	2010 - 2012	
	Location	Danang City	
	Beneficiaries (target group)	All the solid waste collection discharger	
	Sub Components	<ul style="list-style-type: none"> • Environmental education through community and school • Awareness campaign • Improve customer relation through introduction of computerized system. • Technical training for URENCO staff 	
	Plan and Layout		
	Operation and Management	URENCO, DONRE	
	Cost (investment, recurrent)	0.6 million USD allotted by Danang City	
	Revenue (if any)		
	Rationale	<p>Once intermediate treatment is introduced, source separation for domestic waste is unavoidable. It means awareness for the community and citizens are required and a potential for cooperation was observed by the fact that source separation was succeeded in the pilot project. Results from the JICA 3R project in Hanoi shows that comprehensive approach for reduction of the waste seems effective. Source separation, free market for exchanging reusable goods, "eco-bag" might contribute the reduction. Fee collection rate from the citizens is relatively low compared with the other utilities. This can be improved through awareness campaign and computerized system even though their willingness to pay seems low.</p>	
Implementation	Agency	DONRE, URENCO, DOET	
	Planning Requirement	<ul style="list-style-type: none"> • Programme of environmental education shall be integrated with the other sector 	
	Funding	DPC, ODA technical cooperation,	
	Resettlement Requirement	None	
	Institutional Arrangement	<ul style="list-style-type: none"> • Financial cost sharing for treatment sector should be agreed since willingness to pay from the citizens is low. • Cooperation among existing organizations working this sector seems crucial. 	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Fund source, 	
Recommendation		<ul style="list-style-type: none"> • Formulation of the details of the project • Finding a fund source 	

HUMAN RESOURCE DEVELOPMENT

Hr-1

Subsector		Human Resource Development	H
Core Strategy		Expand and upgrade higher education	H1
Nature of Project		Proposed by DC	
Title of Project / Program		Danang University Village Town Development Project	
Objectives		<ul style="list-style-type: none"> • Develop Danang University as a national center for training and research in the central region. • Develop the university village as a center of research and supply source of advanced technology, information science, biology, environment management and other majors which related to the driven industries of Danang city. • Develop the university village as a supply source of advanced degree students, researchers and lecturers, as well as a training center for above majors. 	
Outline	Period	2016 - 2025	
	Location	Ngu Hanh Son (and Quang Nam Province)	
	Beneficiaries (target group)	<ul style="list-style-type: none"> • Students and lecturers at Danang University • Prospective students to Danang University • Researchers • Business and Industry in high technology, information science, biology, environment management 	
	Sub Components	<ul style="list-style-type: none"> • Build university facilities for; <ul style="list-style-type: none"> ➢ Technology university (29.3ha) ➢ Teacher training university (11ha) ➢ Economic university (16.8ha) ➢ Construction university (4.4ha) ➢ Foreign language university (15.6ha) ➢ Technology college (15.6ha) • Build research centers for advanced technology, information science, biology and environment management (23.3ha) • Build a post-telecommunication school (3.9ha) • Build university staff housings and dormitories for students (33.2ha) • Establish an incubation center for advance technology and information technology with business partners • Build athletic facilities and a conference hall • Conduct exchange programs with prominent foreign universities (students, lecturers and programs) • Engage a partner arrangement with prominent foreign universities to establish an international-standard university in the university village, besides the one on-going now in Hoa Vang district. 	
	Plan and Layout	Land area 200 – 300 ha	
	Operation and Management	University village management board, Danang University	
	Cost (investment, recurrent)	1,000 billion VND	
	Revenue (if any)	Tuition and possible investment from business partners to research and incubation centers Financial assistance from the central and local governments	
	Rationale	It is aimed that Danang University will be developed as a national center for university-level training and research and a source center for educating prospective university lecturers and researchers.	
	Implementation	Agency	Ministry of Education and Training Danang People's Committee Department of Planning and Investment (University village management board of Danang University)
Planning Requirement		<ul style="list-style-type: none"> • The central government endorses the development plan and 	

		<p>allocates and disburses the necessary budget.</p> <ul style="list-style-type: none"> • Danang People's Committee and Quang Namu People's Committee agree on and proactively foster the development of the university village • Planned land is cleared in scheduled time
	Funding	<p>Central Government ODA (multilateral & bilateral assistance)</p>
	Resettlement Requirement	<p>Yes</p>
	Institutional Arrangement	<p>University village management board is already established under Danang University</p> <p>Coordinating agency</p> <ul style="list-style-type: none"> - Department of Planning and Investment - Department of Construction - Danang Transportation and Public Works - Department of Industry - Danang Housing Management Company
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • The central government will allocate and disburse necessary development budget accordingly. • Land acquisition and resettlement will be carried out without major problems in scheduled time. • Danang University can bring over prominent professors, foreign universities and draw planned number of students. • The management board can successfully attract business entities to invest in a research institute. • The management board can successfully agree on setting up a incubation center with business partners.
Recommendation		

Hr-3

Subsector		Human Resource Development	H
Core Strategy		Expand and upgrade higher education	H1
Nature of Project		Proposed by DC	
Title of Project / Program		Build Medical and Pharmacy University	
Objectives		<ul style="list-style-type: none"> • Function as supply source of qualified doctors and pharmacists • Function as information source center of most latest medical and pharmaceutical knowledge 	
Outline	Period	2016– 2025	
	Location	Unknown	
	Beneficiaries (target group)	Residents of Danang city, at large Hospital, healthcare center, medical service unit at commune level and pharmacy	
	Sub Components	<ul style="list-style-type: none"> • Construction of medical and pharmacy university • Construction of research center • Construction of attached university hospital • Construction of staff housing and dormitory for students • Medical and pharmaceutical courses development • Procurement of necessary medical equipment • Recruitment of prominent professors and lecturers 	
	Plan and Layout	Unknown	
	Operation and Management	Department of Health - Management board of medical and pharmacy university	
	Cost (investment, recurrent)	Unknown	
	Revenue (if any)	Running costs of the university will be mostly covered by tuition and subsidy from either the central or local government, or from both. The attached hospital will be run with revenue like any other hospitals.	
	Rationale	<p>Danang city has a plan to expand the number of hospital and enhance the capacity of medical staff at existing hospital, and healthcare centers at both at the district and commune levels. In the past five years, the number of medical staff increases about 1.5 times, likewise the number of doctors. It seems, however, there would be not much idle human resource for newly developing and planned hospitals, i.e. a new general hospital, nuclear medicine and radioactivity center, tuberculosis hospital and preventive medical center, which are all scheduled to be built by 2011. Because of no medical university in Danang city, doctors must be recruited from other cities, like TT Hue and Ho Chi Minh city, i.e. there is no supply source for human resource in medical and pharmaceutical field in the city. Danang city has now only one higher education school in healthcare field, i.e. National Secondary School of Health-Care Technology No.2. It is a huge drawback for Danang city, which aim to be a medical center for the neighboring provinces in the Central and Central Highland region as a whole.</p>	
Implementation	Agency	• Department of Health	
	Planning Requirement	Ministry of Education and Training approves the development plan and allocate necessary budget for the construction	
	Funding	Central government budget	
	Resettlement Requirement	Yes	
	Institutional Arrangement	Executing Agency: - Department of Health Coordination with: - Ministry of Education and Training - Ministry of Finance and Department of Finance	

		- Danang People's Committee
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Approval from the Ministry of Education and Training on the development of the university and budget allocation from the central government. • Necessary land is allocated by the local government • Land acquisition and resettlement is carried out without major problems. • Successful recruitment of prominent professors and lecturers.
Recommendation		None

MUNICIPAL FINANCE

Mf-1

Subsector		Municipal Finance	I
Core Strategy		Expand own funding source	I1
Nature of Project		Proposed by ST	
Title of Project / Program		Eco-Fund-Raising Project	
Objectives		<ul style="list-style-type: none"> • To set and collect eco-fees in Danang municipal budget to cover part of project budgets for implementing eco-projects/programs • To raise people's awareness about environment 	
Outline	Period	2016 - 2025	
	Location	Danang city	
	Beneficiaries (target group)	All people in Danang	
	Sub Components	<ul style="list-style-type: none"> • Study on the flame work of Eco-fee • Introduction of Gas Emission Fee • Introduction of Environment City Entrance Fee • Introduction of Fee of parking at public spaces • Introduction of Fee of parking at public spaces • Promote public relations for the Environment City 	
	Plan and Layout	After GOV's approval Danang PC will make an institutional arrangement on fee collection method with the General Tax Office of Danang and DOF. After enforcement of the fees Danang city will collect fees from target groups and use the revenue to implement eco-projects/programs in the Master plan.	
	Operation and Management	Danang PC, General Tax Office (the GOV)	
	Cost (investment, recurrent)	50-100 million VND	
	Revenue (if any)	Gas Emission Fee: 40 billion VND/year Environment City Entrance Fee: 20 billion VND/year	
	Rationale	Since Danang city declared to become the Environment City, Danang PC should cope with people to achieve the goal. Fees will contribute for not only stabilizing financial capacity but also raising people's awareness about environment.	
Implementation	Agency	General Tax Office of Danang city, DOF, DONRE	
	Planning Requirement	Consistent database of targets of taxation, Efficient and rational fee collection system	
	Funding	From municipal budget	
	Resettlement Requirement	None	
	Institutional Arrangement	Danang PC is required to win GOV's approval on constituting new experimental fees, establish the independent fund pool in the municipal budget to use the revenue for specific projects	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Positive commitment of Danang PC to gain GOV's approval • Sufficient accountability to Danang people, secure open communication before introduction of fees to have people's support and transparency of use of the fund 	
Recommendation			

Mf-2

Subsector		Municipal Finance	I
Core Strategy		Introduce PPP scheme	I3
Nature of Project		Proposed by ST	
Title of Project / Program		Project for promotion of PPP scheme in Danang City	
Objectives		<ul style="list-style-type: none"> • Capacity development for the public agencies in implementing PPP scheme projects • To research critical issues and obstructions for PPP projects in the current system of law, find solutions along with supervision of the central government, coordinating with private sector (contractors) • To construct and operate the pilot public facility in PPP mechanism 	
Outline	Period	2016 - 2025	
	Location	Danang city	
	Beneficiaries (target group)	Direct: related public agencies, private sector (project contractors) Indirect: inhabitants in the project area	
	Sub Components	<ul style="list-style-type: none"> • Feasibility study (FS) and Capacity development • Implementation of the experimental PPP projects based on the results of the feasibility study 	
	Plan and Layout	Component 1-1: Investigation of the profit distribution and institutional settings of the PPP project implemented by the foreign contractors / select one pilot PPP project, analyze risks, finance possibility, arranging related party. Component 1-2: Capacity development on the planning of PPP projects by international technical assistance Combining with FS Component 2: Implement the PPP project, research problems of institutional settings to solve problems	
	Operation and Management	<ul style="list-style-type: none"> • Manager of PMU: Danang PC • Supervisor for PMU: MPI, MOF • Members of PMU: DPI, DOF, DONRE, DOT, DOC, DOET, DOH and other public agencies • Advisor for PMU International consultant • Two working group under PMU WG 1: FS and Capacity development, leader is DPI, members are other public agencies. WG 2: Implementation of PPP project, leader is the related Department of the facility. 	
	Cost (investment, recurrent)	400-500 million VND (only FS and capacity development part, not including cost of pilot project)	
	Revenue (if any)	Applying user-pay principle, level of charge is regulated by Danang PC and the GOV	
	Rationale	Amended Decree 78 and its Circular In Vietnam a few company like some SOEs has enough capital and technical strength in construction and operation of public facilities. Vietnamese SOEs, however, needs improvement of management of projects in terms of efficiency and quality of service. PPP is suitable to be implemented by foreign skilled agencies.	
Implementation	Agency	Foreign contractor	
	Planning Requirement	Advice from international consultant for the PPP contract documentation	
	Funding	Feasibility study: City budget or ODA fund Construction and operation of the facility: Contractor with risk mitigation by the government.	

	Resettlement Requirement	Depends on the pilot project
	Institutional Arrangement	FS will be done in line with the new Decree on PPP. According to FS the PMU will propose necessary regulation to GOV and apply it after approval.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strong commitment of Vietnamese local government to success the user charge setting that meet the optimal balance between current low level and minimum profitable level of the public service • Well formulated contract between Danang city and the private company, featuring skilled private consulting agency in PPP scheme in Asian countries
Recommendation		

Mf-3

Subsector		Municipal Finance	I
Core Strategy		Public Finance Capacity Development	14
Nature of Project		Proposed by ST	
Title of Project / Program		Project for strengthening public relations of tax information	
Objectives The accountability for municipal finance by Danang city is strengthen		<ul style="list-style-type: none"> • Overall goal: Levy ratio of taxes, especially taxes, fees and charges from individuals are improved • People's awareness and understanding for tax payments is improved • Contents and strategy of public relations of tax information are improved • Information services by the government are improved 	
Outline	Period	2016 - 2025	
	Location	Danang city	
	Beneficiaries (target group)	People in Danang, Danang government	
	Sub Components	<ul style="list-style-type: none"> • Study on contents and strategy of public relations in this area. • Study on introducing the system of accountability for use of tax • Providing information services and public relations to the citizens 	
	Plan and Layout	<ul style="list-style-type: none"> - Contents and strategy of public relations Examining advantage and disadvantage of conventional public relations and strategic reform plans. - System of accountability Examining the scope of exposure of municipal information and institutional settings of monitoring and evaluation of use of taxes, and inform methods to citizens - Capacity development for government staff Organizing seminar workshop to strengthen staff's understanding of accountability for municipal activities - Setting information sites, events and publish/broadcast to provide information and services based on the strategy investigated in the FS 	
	Operation and Management	<ul style="list-style-type: none"> - Manager of PMU: Danang PC - Members of PMU: Government Office, DOF, General Tax Office (GTO) of Danang, mass organizations (Father Front etc.) Advisor from International technical assistance scheme - A working group for component1 and 2, another working group for component 3 are organized under PMU 	
	Cost (investment, recurrent)	250 – 300 million VND	
	Revenue (if any)	-	
	Rationale	Future strategy of capacity development for stabilizing municipal finance requires not only improvement of tax collection capacity for officials but also focusing on strengthening of people's awareness of tax payments. Because, up to 2025, tax from individuals are going to gain in importance.	
	Implementation	Agency	Component 1 and 2: Implemented by PMU members with International technical assistance Component 3: Implemented by Danang PC with international technical assistance
Planning Requirement		Opinions from the society are openly taken up to the plan. In providing information service stakeholders in whole society are fully involved.	
Funding		Municipal budget and ODA	

	Resettlement Requirement	None
	Institutional Arrangement	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Regarding accountability, the scope of exposed finance information should be limited to specific area otherwise it causes confusions among citizens.
Recommendation		<ul style="list-style-type: none"> • This project can be started from the public relations on the Local specific-purpose fee in the Master plan if these fees are constituted. • Other than international consultant, domestic or international NGO should participate.

ADMINISTRATIVE CAPACITY DEVELOPMENT

Ca-3

Subsector		Administrative Capacity Development	J
Core Strategy		Strengthen planning capacity and institutional framework for urban development and management	J1
Nature of Project		Proposed by ST	
Title of Project / Program		Establishment of Special Task Force for environmental protection in each department	
Objectives		<ul style="list-style-type: none"> • Enhance planning capacity of each department for the environment city project • Formulate medium and long term effective environmental plan and strategy for each department • Promote active participation of key stakeholders in decision making process • Develop human resource in each relevant department 	
Outline	Period	2016 - 2025	
	Location	Da Nang	
	Beneficiaries (target group)	Implementing departments for Environment City Project	
	Sub Components		
	Plan and Layout	The special task forces are formed to develop effective strategy for each vital environmental issue for department. The task forces consist of competent middle ranked officers from relevant division, expert (researchers/university professors), representatives of state-owned entities/private sectors and mass media as well as representatives of Father Front and of 5 major public unions wherever necessary.	
	Operation and Management	Da Nang city departments in People's Committee	
	Cost (investment, recurrent)		
	Revenue (if any)		
	Rationale	Although the Da Nang People's Committee assigns important roles to play to many departments, it is difficult for them to effectively plan and implement the assigned projects. The capacity of planning and strategy formulation will be significantly enhanced if there are solid task forces for each vital issue. The establishment of special task force can also promote necessary coordination among relevant divisions, integrate needs and concerns of private sectors and public unions into the department plan and strategy formulation, enhance ownership of major stakeholders, and contribute to human resource development in each department.	
Implementation	Agency	Da Nang city departments in People's Committee	
	Planning Requirement		
	Funding		
	Resettlement Requirement		
	Institutional Arrangement	Each department will establish a secretariat for the task force.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strong support from Da Nang People's Committee, Dept. of Internal Affair, and related departments and stakeholders 	
Recommendation		<ul style="list-style-type: none"> • It is recommended to conduct study tours to other countries that developed high level of institutional arrangement for environmental planning and strategies 	

Ca-4

Subsector		Administrative Capacity Development	J
Core Strategy		Strengthen planning capacity and institutional framework for urban development and management	J1
Nature of Project		Proposed by ST	
Title of Project / Program		Establishment of Cross-sectional Working Groups	
Objectives		<ul style="list-style-type: none"> • Enhance planning capacity of Da Nang Steering Committee for the environment city project • Develop effective concrete strategy for the project • Promote active participation of key stakeholders in decision making process • Develop human resource in related departments 	
Outline	Period	2016 - 2025	
	Location	Da Nang	
	Beneficiaries (target group)	Da Nang Steering Committee, Relevant departments	
	Sub Components		
	Plan and Layout	The working groups are formed under Da Nang Steering Committee at least for each issue area, such as air, water and land in order to formulate concrete strategies on various important environmental issues. The groups consist of competent middle ranked officers from relevant departments, researchers/university professors, representatives of private sector and mass media as well as representatives of Father Front and of 5 major public unions wherever necessary.	
	Operation and Management	DONRE	
	Cost (investment, recurrent)		
	Revenue (if any)		
	Rationale	Although the Da Nang city government established the steering committee for environment city project, it is difficult for the committee to perform proper functions due to insufficient support structure. The capacity of planning and strategy formulation will be significantly enhanced if there are solid competent working groups for each vital issue. The establishment of cross-sectional working groups can also promote necessary coordination among relevant organizations, integrate needs and concerns of private sectors and public unions into the government plan and strategy formulation, enhance ownership of major stakeholders, and contribute to human resource development of the city government.	
Implementation	Agency	DONRE	
	Planning Requirement		
	Funding		
	Resettlement Requirement		
	Institutional Arrangement	The cross-sectional working groups can be formed either under Da Nang Steering Committee or in DONRE. DONRE will establish a secretariat for the working groups.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strong support from Da Nang People's Committee, DONRE, Dept. of Internal Affairs, DPI, DOF, and related departments and stakeholders 	
Recommendation		<ul style="list-style-type: none"> • It is recommended to conduct study tours to other countries that developed high level of institutional arrangement for environmental planning and strategies 	

Ca-9

Subsector		Administrative Capacity Development	J
Core Strategy		Establish effective public participation mechanism in urban planning, development and monitoring process	J2
Nature of Project		Proposed by ST	
Title of Project / Program		Establishment of Steering Committee at District and Commune levels for environment city project	
Objectives		<ul style="list-style-type: none"> • Promote active participation of key stakeholders in decision making process at district and commune levels • Formulate medium and long term effective environmental plan and strategy for each responsible area • Reflect local needs in the local level planning and strategic formulation for environment city project • Develop human resource in district and commune levels 	
Outline	Period	2016 - 2025	
	Location	Da Nang	
	Beneficiaries (target group)	District and Commune PCs, Public unions, Private sectors, Communities in Da Nang city.	
	Sub Components		
	Plan and Layout	Members include the Chairman of district/commune People's Committee, representatives of relevant government agencies, representatives of private sector and major public unions. The functions of newly established steering committees include formulating district/commune environmental plan and strategy in responsible area, monitoring the implementation of projects, taking lessons for the next year and replicate the best practice.	
	Operation and Management	All district and commune People's Committees	
	Cost (investment, recurrent)		
	Revenue (if any)		
	Rationale	At present, there is only one steering committee at the city level for environmental protection. This may bring about the situation in which many local needs are not reflected in the city level planning formulation. In addition, this institutional arrangement may significantly limit the participation of civil society in environmental movements. The propose mechanism is to introduce an interactive (top-down and bottom-up process) approach to planning formulation and to promote broad-based consultation with private sector and civil society in formulation and implementation of long- and medium-term environmental strategies. The establishment of steering committee at local levels can also promote necessary coordination among major stakeholders, , enhance ownership of major stakeholders, and contribute to human resource development in all citizens.	
Implementation	Agency	All district and commune People's Committees	
	Planning Requirement		
	Funding		
	Resettlement Requirement		
	Institutional Arrangement	Each district and commune People's Committee will establish a secretariat for their steering committee.	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strong support from Da Nang People's Committee, Dept. of Internal Affair, and related departments and stakeholders 	
Recommendation		<ul style="list-style-type: none"> • It is recommended to conduct study tours to other districts and communities that developed high level of institutional arrangements for environmental planning and strategies. • It is recommended that mass media report periodically the activities of each district and communes to Da Nang citizens. 	

Ca-10

Subsector		Administrative Capacity Development	J
Core Strategy		Establish effective public participation mechanism in urban planning, development and monitoring process	J2
Nature of Project		Proposed by DC and revised by ST	
Title of Project / Program		Promotion of More Contests and Events for Environmental Protection	
Objectives		<ul style="list-style-type: none"> • Promote active participation of civil society in planning, implementing, and monitoring environmental protection projects • Reward individuals and groups for special contribution to environment city project • Make “Da Nang – Environment City” project city wide movements • Develop capacity of all citizens in environmental protection 	
Outline	Period	2016 - 2025	
	Location	Da Nang	
	Beneficiaries (target group)	Organizations responsible for environment city project as well as all citizens in Da Nang city	
	Sub Components	<ul style="list-style-type: none"> • Issues the standards for status of environment district, commune, school, household, company, etc. • Rank each district, commune, schools, company, etc., according to the standards • Hold competitions among districts, communes, schools, company, etc., for the best environment status. • Monitor the competitions, recognize and reward those with special contribution to environmental protection, • Analyze the successful cases and replicate the best practice 	
	Plan and Layout	The city government issues the standards for status of environment districts, communes, schools, company, etc., Then, each district, commune, schools, company, etc., will be ranked according to the standards. Next, city government or any interested organizations will hold contests to promote competitions among districts, communes, schools, company for the best environment status. During contests, responsible organizations will monitor the competitions, recognize and reward those with special contribution to environmental protection. Finally responsible organizations analyze the successful cases and replicate the best practice	
	Operation and Management	City PC, District PC, Commune PC, Departments and any organizations that are interested in holding this kind of contests	
	Cost (investment, recurrent)		
	Revenue (if any)		
	Rationale	This proposal is an extension of several movements already initiated in Da Nang People’s Committee. Now the youth union and women’s union hold contests among their members for clean-beautiful Sunday movement. This kind of contest and event can reward individual and groups for special contribution and provides them with incentive to move for environmental protection. The expansion of these activities can make environmental protection movements spread to the whole city, which may significantly contribute to the realization of environment city in the future.	
Implementation	Agency	City PC, District PC, Commune PC, Departments and any organizations that are interested in holding this kind of contests	
	Planning Requirement		
	Funding		

	Resettlement Requirement	
	Institutional Arrangement	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Strong support from Da Nang People's Committee, related departments, District and Commune PC, and other stakeholders
Recommendation		<ul style="list-style-type: none"> • It is recommended that mass media report periodically the situation of each contest and event, and introduce successful cases to Da Nang citizens.

TOURISM DEVELOPMENT

To-1

Subsector		Tourism Development	K
Core Strategy		Develop beach resort area in environmentally sustainable way (beach zone)	K1
Nature of Project		Revision of DC Project	
Title of Project / Program		Integrated tourism infrastructure development along Da Nang Beach Resort Area	
Objectives		<ul style="list-style-type: none"> • Ensuring a sustainability of tourism development along the beach resort area of Da Nang or the Moon Beach area • Provision of integrated tourism infrastructure such as waste water treatment units, water supply network, power supply network, car parking areas, entertainment area, etc. so as to reduce the cost of utilities for the resort operators thereby enhancing the foreign direct investment 	
Outline	Period	2016-2025	
	Location	Da Nang, Beach Zone	
	Beneficiaries (target group)	Tourism related industry sector	
	Sub Components	<ul style="list-style-type: none"> • Provision of collective water treatment unit, water supply network, power supply network, etc. • Beach cleaning equipment, dust bins, toilets, etc. 	
	Plan and Layout	Along the beach resort area	
	Operation and Management	Department of Tourism and Sports	
	Cost (investment, recurrent)	US\$ 10.0 million or more	
	Revenue (if any)	Utility delivery charge to the resort operators.	
	Rationale	The provision of necessary infrastructures for operation of resort operation in collective way ensure the least cost to the resort operators thereby enhance the tourism investment and ensure the protection of environment degradation in and surrounding zone of the target area	
Implementation	Agency	DOT	
	Planning Requirement	Technical development plan and financial viability study	
	Funding		
	Resettlement Requirement	None	
	Institutional Arrangement	Establishment of department for beach resort zone development and management as well as environment protection and monitoring	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Environment conservation and protection • Promotion of tourism investment in environmentally controlled zone 	
Recommendation			

To-4

Subsector		Tourism Development	K
Core Strategy		Develop mountain resort area in environmentally sustainable way (Ba Na mountain and mountaintop zone)	K2
Nature of Project		Revision of DC Project	
Title of Project / Program		Integrated tourism infrastructure development at the Ba Na mountaintop	
Objectives		<ul style="list-style-type: none"> • Ensuring a sustainability of tourism development at environmentally fragile the Ba Na mountaintop. • Provision of integrated tourism infrastructure such as waste water treatment units, water supply network, power supply network, car parking areas, entertainment area, etc. so as to reduce the cost of utilities for the resort operators thereby enhancing the foreign direct investment as well as conserve the natural environment 	
Outline	Period	2016-2025	
	Location	Da Nang, Ba Na mountain top	
	Beneficiaries (target group)	Tourism related industry sector	
	Sub Components	<ul style="list-style-type: none"> • Provision of collective water treatment unit, water supply network, power supply network, etc. • Dust bins, toilets, environmentally friendly trekking route, etc. 	
	Plan and Layout	Ba Na mountain top	
	Operation and Management	Department of Tourism and Sports	
	Cost (investment, recurrent)	US\$ 10.0 million or more	
	Revenue (if any)	Utility delivery charge to the resort operators.	
	Rationale	The provision of necessary infrastructures for operation of resort operation in collective way ensure the least cost to the resort operators thereby enhance the tourism investment and ensure the protection of environment degradation in and surrounding zone of the target area	
Implementation	Agency	DOT	
	Planning Requirement	Technical development plan and financial viability study	
	Funding		
	Resettlement Requirement	None	
	Institutional Arrangement	Establishment of department for tourism zone development and management as well as environment protection and monitoring	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Environment conservation and protection • Promotion of tourism investment in environmentally controlled zone 	
Recommendation			

Subsector		Environmental Management	C
Core Strategy		Preserve ecosystem and develop eco-tourism	C2
Nature of Project		Proposed by DC , and Enhanced by ST ¹⁾	
Title of Project / Program		Integrated Eco-tourism Promotion Program	
Objectives		<ul style="list-style-type: none"> • To realize sustainable tourism development in association with natural resource conservation and ecological system; • To develop model eco-tourism with community involvement. 	
Outline	Period	2016 - 2025	
	Location	Danang City	
	Beneficiaries (target group)	Citizens and employees in the tourism industries	
	Sub Components	<ol style="list-style-type: none"> (1) Encouragement of model projects of “Ecological Villages” (2) Exploration of “Local Tourism Products” (3) Organization of “Eco-tourism Promotion & Supervisory Committee” (4) Introduction of an “Environmental Fee Charge System” 	
Plan and Layout:			
<p>Four (4) Significant Elements for Eco-tourism Development: Four components are all necessary to formulate a feasible and sustainable eco-tourism in best use of local resources, facilitating environmental conservation as conceptually shown in the right figure.</p>			
<ul style="list-style-type: none"> • Encouragement of Ecological Villages, as one of model projects, aims at facilitation of local community's participation in the eco-tourism program; • Exploration of local tourism products aims to maximize local economic benefits generated by the tourism sector; • Organization of an “Eco-tourism Promotion & Supervisory Committee” with stakeholder groups such as community and district leaders, representatives of hoteliers and tourism business, NGOs specialized in environmental protections and conservation, academic area and journalists as well as city officials concerned, is a management tool to check orderly eco-tourism development in compliance with the environmental guidelines. • Establishment of an “Environment Fee System” aims at building a financial tool to conduct necessary environmental conservation and eco-tourism development programs/projects which shall be utilized by local stakeholders. <i>This fund shall be incorporated into “the Danang Environmental Conservation Fund”</i> as proposed in the category C5: Develop Institutional and Organizational Systems. 			
<p>Environment Fee System: For environmental conservation in a sustainable manner, a financial source, which can be locally utilized for necessary and timely activities, should be pooled as one of diversified funds. Learning from other countries' experiences in promoting eco-tourism, some of “environment-conservation fee” are levied from tourists on a surcharge of hotel bills and contributions of hoteliers who are performing the tourism business in use of natural and environment resources. The amount of environment fee varies from one country to another (US\$2.0 to 20.0 per night per capita). The most appropriate level shall be studied at the Eco-tourism Promotion & Supervisory Committee.</p>			

	Operation and Management	This project is a packaged project, including four components, requiring close integration with a number of different departments. Therefore, for a well-coordinated operation and management, an “Eco-tourism Promotion & Supervisory Committee” should be organized at the initial stage.
	Cost (investment, recurrent)	The total project costs: US\$20.0 million , of which: <ul style="list-style-type: none"> • US\$ 5.0 million for the Ecological Villages Project, • US\$ 5.0 million for the revolving fund for “Exploration of local tourism products; • US\$ 10.0 million for variety of eco-projects. These investments shall be covered mostly by “Environment Fee System” and local government’s subsidies.
	Revenue (if any)	Revenues to be generated by the eco-tourism activities will be the source of revolving funds.
	Rationale	Although there are a great potential and a plenty of investment opportunities in the tourism development in Danang and its neighboring provinces, non-disciplinary construction of tourism facilities in no land use policies should be avoided. Eco-tourism is a commonly sharable concept for tourism development where social/cultural assets, natural resources and environmental factors should be taken into account.
Implementation	Agency	DOCST (Culture, Sports and Tourism), DONRE, DOFAF, DOTPW, Distric PCs, DOF(Finance), DOIA (Internal Affairs)
	Planning Requirement	An action plan should be made by DOCST in coordination with all relevant departments above.
	Funding	To be funded by the Danang City Government for action planning, with technical assistance from international donor(s).
	Resettlement Requirement	No relevant
	Institutional Arrangement	An institutional arrangement and legal setting will be a key to establish the “Environment Fee System”.
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Organizational and administrative capacity of DOCST is a key to orient different stakeholders’ interest toward a vision of eco-tourism. • Consensus-making for the Environment Fee System is another important milestone to success.
Recommendation		<ul style="list-style-type: none"> • As mentioned above, it is recommended to organize the “Eco-tourism Promotion & Supervisory Committee” DOCST at the initial stage. This Eco-tourism Committee shall conduct other three (3) sub-components as one package well-coordination among different stakeholder groups. This This Eco-tourism Committee may be chaired by a representative of the private sector, and co-chaired by Directors of DOCST and DONRE. • The introduction of the Environment Fee System deserves to be studied in consultation with DOF, DOIA (Internal Affairs).

To-7

Subsector		Tourism Development	K
Core Strategy		Enhancement of marine tourism	K3
Nature of Project		Revision of DC Project	
Title of Project / Program		Public marina development project	
Objectives		<ul style="list-style-type: none"> • Enhancement and promotion of marine sports and tourism to provide diversified tourism destination and activities aiming at increase of tourism income along the sea coast area of the Central Region. • Human resources development needed for the enhancement and promotion of marine tourism 	
Outline	Period	2016-2025	
	Location	Da Nang	
	Beneficiaries (target group)	High school, university students	
	Sub Components	<ul style="list-style-type: none"> • Training facilities for sailing, boating, diving, etc. • Training of trainers for marine sports (sailing, dinghy racing, diving, etc.) 	
	Plan and Layout	Provision of marina suitable for dinghy racing, marine sports education and training, Refer Attachment-1	
	Operation and Management	Department of Tourism and Sports	
	Cost (investment, recurrent)	US\$ 3 million	
	Revenue (if any)	Restaurant, conference, rent boat, etc.	
	Rationale	Although the central region is earmarked as the core of marine tourism as spelled out in the National Tourism Development Strategy prepared by VNAT and Ministry of Tourism, Culture and Sports, no proper facility especially marina as the base for marine tourism and sport does not exist thus no proper education and training for marine sports especially sailing and diving taken place. It is imperative to develop human resources who undertake the promotion and enhancement of marine sports as well as marine tourism.	
Implementation	Agency	DOT	
	Planning Requirement	Design of marina	
	Funding		
	Resettlement Requirement	None	
	Institutional Arrangement	Establishment of department for promotion of marine sports in the municipal government may be needed	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Technical assistance as training of trainer is essential for marine sports (sailing, dinghy racing, wind surfing, diving, etc.) 	
Recommendation		<ul style="list-style-type: none"> • Technical collaboration may be available from various countries as NGO activity of private school, sister cities, etc. • Well trained personnel for marine sports may have a chance to challenge regional regatta, international regatta and Olympics in the future. The regional and international regatta can be held in Da Nang for promotion of sports as well as tourism. 	

To-8

Subsector		Tourism Development	K
Core Strategy		Enhancement of marine tourism	K3
Nature of Project		Proposed by ST	
Title of Project / Program		Improvement of xxx Local Port	
Objectives		<ul style="list-style-type: none"> • Enhancement and promotion of marine tourism along the coastal area of the Central Region • Increase an average length of stay of tourists aiming at increase tourism income as well as generate employment opportunities • Ensure the marine safety and provide rescue system for marine related accident and trouble 	
Outline	Period	2016-2025	
	Location	Da Nang, Son Tra District	
	Beneficiaries (target group)	Tourism related industry sector	
	Sub Components	<ul style="list-style-type: none"> • Sub component 1 Improvement and expansion of xxx Port as a base for marine tourism at Moon Beach • Sub component 2 Training of trainers for marine rescue operation 	
	Plan and Layout	Provision of appropriate berth and landing / boarding facility for tourism boat plying between Da Nang and other local ports in Hoi Anh, Thua Thin Hue provinces. Refer Attachment-1	
	Operation and Management	Department of Tourism and Sports	
	Cost (investment, recurrent)	US\$ 5 million	
	Revenue (if any)	Leasing the berth and mooring facilities for tourism boat operators	
	Rationale	The diversification of tourism products ensures an increased average stay of tourists in Da Nang, thereby, increase a tourism income and job opportunities. A systematic rescue operation is imperative to promote and enhance the marine tourism along the coastal area of the Central Region	
Implementation	Agency	DOT	
	Planning Requirement	Design and construction of port, provision of model tourism boat, rescue system and provision of rescue boat and equipment	
	Funding		
	Resettlement Requirement	None	
	Institutional Arrangement		
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Environment conservation and protection 	
Recommendation			

To-9

Subsector		Tourism Development	K
Core Strategy		Marine tourism development and promotion	K3
Nature of Project		Proposed by ST	
Title of Project / Program		Tourism Cruise Ship Project	
Objectives		<ul style="list-style-type: none"> • Enhancement of marine tourism and coastal navigation tours aiming at increased tourism alternative options. • Provision of coastal ships plying Danang – Hue – Hoi An. 	
Outline	Period	2016-2025	
	Location	Da Nang – Hue, Da Nang – Hoi An	
	Beneficiaries (target group)	Tourism related industry sector	
	Sub Components	<ul style="list-style-type: none"> • Provision of tourist ships with proper accommodation for cruise service connecting Danang – Hue, Danang – Hoi An. • Training of captain, navigator, marine engine mechanics, cook, service persons needed for hotel ship. Sub component 3 Appropriate marina, port with jetty, mooring facilities, needed for coastal cruise ship	
	Plan and Layout	Cruise ship having traditional feature of trade ship used in 16 th centuries, modern cruise ship, etc.	
	Operation and Management	Department of Tourism and Sports	
	Cost (investment, recurrent)	US\$ 12.0 million or more	
	Revenue (if any)	Navigation fare, hotel charge, tourist agent commission, etc.	
	Rationale	The cruise ships plying Danang – Hue, Danang – Hoi An is imperative for enhancement of marine tourism along the coast of the Central Region	
Implementation	Agency	DOT	
	Planning Requirement	Technical development plan and financial viability study	
	Funding		
	Resettlement Requirement	None	
	Institutional Arrangement		
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Establishment of financial assistance for small and medium sized tourism enterprise to build cruise ships. • Human resource development needed for operation and maintenance of cruise ships appropriately designed for the marine tourism activities along the coast of the Central Region 	
Recommendation			

To-10

Subsector		Tourism Development	K
Core Strategy		Enhancement of outdoor sports	K4
Nature of Project		Proposed by ST	
Title of Project / Program		Development of outdoor sports ground	
Objectives		<ul style="list-style-type: none"> • Objective 1 Promotion of tourism by enhancement of outdoor sports. • Objective 2... Increase an average length of stay of tourists aiming at increase tourism income as well as generate employment opportunities 	
Outline	Period	2016-2025	
	Location	Da Nang, xxxx District	
	Beneficiaries (target group)	Tourism related industry sector	
	Sub Components	<ul style="list-style-type: none"> • Land use plan for outdoor sporting • Training of trainers for various type of outdoor sports 	
	Plan and Layout	Establishment of various type and kind of outdoor sports including but not limited to river rafting, canoeing, fishing, mountain bicycle, cycling, mountain bike, archery, shooting, camping, trekking, hang glider, Refer Attachment-1	
	Operation and Management	Department of Tourism and Sports	
	Cost (investment, recurrent)	US\$ 5 million	
	Revenue (if any)	Leasing the necessary facilities and equipment to the operators.	
	Rationale	The diversification of tourism products ensures an increased average stay of tourists in Da Nang, thereby, increase a tourism income and job opportunities.	
Implementation	Agency	DOT	
	Planning Requirement	Land use and various necessary facilities for outdoor sporting.	
	Funding		
	Resettlement Requirement	None	
	Institutional Arrangement	Establishment of department for promotion of outdoor sports in the municipal government may be needed	
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Environment conservation and protection 	
Recommendation			

To-11

Subsector		Tourism Development	K
Core Strategy		Connect regional tourism sites	K5
Nature of Project		Proposed by ST	
Title of Project / Program		Tourism Train Project	
Objectives		<ul style="list-style-type: none"> • Enhancement of railway tourism connecting Hue – Da Nang – Hoi An • Provision of tourism alternative option aiming at smooth connection between three major tourism destination and prolong the length of stay of tourist in the region especially in Da Nang City 	
Outline	Period	2016-2025	
	Location	Da Nang – Hue, Da Nang – Tam My	
	Beneficiaries (target group)	Tourism related industry sector	
	Sub Components	<ul style="list-style-type: none"> • Provision of 2 sets of tourism train composed of 4 Diesel Motor Unit (DMU) cars plying three major tourism destination. • Provision of terminal at each railway station for smooth connection between railway travel and bus travel. Sub component 3 Provision of waiting area for international travelers in Da Nang Railway Station, Hue Station and Tam My Station	
	Plan and Layout	Da Nang Railway Station	
	Operation and Management	Department of Tourism and Sports	
	Cost (investment, recurrent)	US\$ 12.0 million or more	
	Revenue (if any)	Railway passenger fare, travel agent's commission, etc.	
	Rationale	Utilization of most beautiful scenery of railway travel in Vietnam along the edge of Hai Van mountain ridge contribute an increased tourism income.	
Implementation	Agency	DOT / VNR	
	Planning Requirement	Technical development plan and financial viability study	
	Funding		
	Resettlement Requirement	None	
	Institutional Arrangement		
Critical Factors / Conditions for Success		<ul style="list-style-type: none"> • Establishment of train diagram in busy section of railway operation • Promotion of investment in tourism train for designated railway segment 	
Recommendation			

