

*Parks, gardens, hills and
beaches-can Penang provide
enough recreational open
space for the people?*

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overview

- **Natural recreational resources of Penang**
- **Review of some studies of public recreational space requirements**
- **Types of public recreational space**
- **What needs to be done**



Recreational resources of Penang

- **Penang has a great diversity of natural recreational resources**
 - **Parks**
 - **Gardens**
 - **Beaches**
 - **Hills**
 - **Rivers and waterfalls**
- **All these are readily accessible and in a small area**



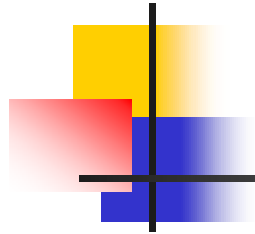
Use of natural recreational resources

- **Penang had developed its natural resources over the years for local recreational use and for tourism**
 - **Penang Hill**
 - **Batu Ferringhii and Tanjung Bungah beaches**
 - **Penang Botanical gardens**



Parks -natural and man made

- Limited number of public parks
 - Youth Park
 - Urban parks
 - Neighborhood parks
- Penang National Park
 - Formerly Pantai Aceh Forest Reserve
- Forestry parks
 - Rimba Rekreasi at Telok Bahang



Gardens

- **Penang waterfall botanical gardens**
 - **Still the only public botanical gardens in Peninsular Malaysia**
 - **Well known tourist attraction**
 - **Monkeys as an attraction**
 - **Extended by over 500 acres by adding surrounding areas into the gardens**
 - **Development in progress**



Penang Hill

- Central massif on island and can be seen from all parts of Penang, giving an illusion of a forested green state
- Recreational area with hill forest trails
- Popular walking trails up and crisscross hills
- Popular tourist attraction with funicular railway



Beaches

- North coast of island
 - Batu Ferringhii
 - Tanjung Bungah
 - Telok Duyong
 - Tanjung Tokong

- South west of island
 - Batu Maung
 - Telok Kumba



Rivers and waterfalls

- Penang Island
 - Short rivers with some small waterfalls
 - Polluted at lower reaches
- Seberang Perai
 - Perai river
 - Juru
 - Polluted



Revaluation of natural recreational resources

- Nathan report -1975
- Penang island structure plan -1985
- Penang land use potential study under PEGIS -1992
- Penang environment conservation strategy -1998
- Penang strategic plan II- 2001



Nathan report 1975

- Concern of recreational space mainly from viewpoint of tourism development
- Recreational resources unevenly distributed in state with most attraction features on island
- Beaches generally not up to international standards except for Batu Feringhii and Teluk Duyong
- Mangroves and rocky beaches predominate
- Recommended north coast of island be zoned for tourism development
- Basis of Interim Zoning Plan for development



Penang Island Structure Plan technical report 1985

- **Evaluated all types of recreational open space on the island**
- **Compared the availability of recreational open space in Penang with standards of the Town and Country Department**
- **Identified the amount of recreational open space for the island**
- Recommended some ways to meet the demands



PEGIS and Land use Potential study 1992

- Proposed Land Use plan for the state

- Identified on an Island wide basis the ecologically sensitive areas of the state
 - Water catchment
 - Potential conservation areas
 - Forest reserves
 - Hill land



Penang Environmental Conservation Strategy 1998

- Identified various potential areas to be protected for ecological and conservation reasons
- Proposed a system of conservation areas for the state
 - National parks
 - Wildlife sanctuaries
 - Bird sanctuaries
 - Mangrove reserves
 - Water catchment areas



Penang Strategic Development Plan 2001

- Identified issues concerning public recreational space
- Recommended some strategies to meet the shortage



Why is public recreational space an issue?

- Since the 1980s, the lack of public recreational space has been identified as an issues in a number of state commissioned studies
- Penang has less open space than almost all Malaysian towns and cities
- Public open recreational space will be a measure of quality of life in Penang
- Developed country status of vision 2020 requires adequate amounts of recreational space



Development Trends in Penang

- Population trends
 - Increase of population
 - Island and Sebarang Perai have different growth rates

- Urbanization trend
 - 1995 80% urban
 - 2000 86% urban

- Housing trends
 - Increasing number of units in high rise apartments
 - Size of apartment units small from 500 to 800 square feet
 - Low and medium cost units have no recreational facilities
 - Demand for public recreational space will increase



Trends in demand

- More free time for leisure
 - 6 day work week to 5 ½ to 5 day work week
- Greater emphasis of outdoor recreation
- Greater demand for better quality of environment



Penang does not have enough open green space

- Issue identified in the first Penang structure plan since the 1980s
- Problem also highlighted in other state commissioned studies
 - Land use potential study in PEGIS
 - Penang Environmental Conservation Strategy
 - Penang 1st and 2nd Strategic Development Plan



Reasons why Penang does not have enough open space?

- **Penang relatively old urbanized state which grew without proper planning**
- **State government owns very little public land in state that can be converted to public recreational land**
- **Insufficient attention to planning for outdoor recreation in the past as population was smaller**



Reasons why Penang does not have enough open space?

- **Availability of beaches and coastal waters for recreation, reducing the need for formal open space**
- **Penang hill near city provides for avenue for public recreation**



How much public green space is enough?

- Planners have come out with various standards and criteria
 - Hierarchy of open space requirements
 - Accessibility to public with limited travel time
- Malaysian standards recognizes the need for different types of space, size and accessibility



Public open space standards

- ***Penang island structure plan***
 - 4 ha of public open space for 2500 persons
- ***MPPP standard***
 - 2 ha per 5000 persons
- ***Town and Country Planning Department***
 - 6-7 ha per 1000 persons
 - Putrajaya has more than 40% green
- ***Developed countries***
 - 10 to 30 acres per 1000 persons



Classification of open space of Penang Island Structure Plan 1987

<i>Category</i>	<i>Density standard</i>	<i>Population served</i>	<i>Size of area (ha)</i>
Neighborhood park	one ha per 2500 population	500-5,000	0.2-2.0
Town park	One ha per 2,500	10,000 to 50,000	4-20
Community park	One ha per 2500	50,000 to 100,000	20-40
Regional park	One ha per 2500	200,000	>80

Existing and projected open space requirements in Penang Island - 1985

	Neighbor hood park (ha)	Town park (ha)	Communi ty park (ha)	Regional park (ha)	Total (ha)
existing	35.3	22	101	116	274
Require- ments 1996	234	234	234	234	935
2000	283	283	283	283	1133
2010	317	317	317	317	1268
2020	350	350	350	350	1400

Existing and projected requirement for open space in Sebarang Perai from PECS 1991

	Neighborhood park (ha)	Town park	Community park	Regional park	total
existing	13	26	56	80	175
Requirements 1996	250	250	250	250	1,000
2000	279	279	279	279	1118
2010	342	342	342	342	1268
2020	411	411	411	411	1644



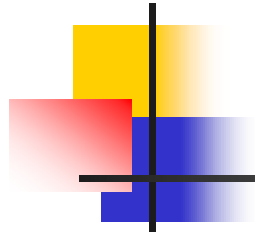
How can Penang get enough open space?

- ***Public policy***

- Existing public open space cannot be used for high density development
- For land conversion, a certain percentage (30%) should be given for public recreational space

- ***Land reclamation of coastal areas***

- The first 100 meters of any coastal land reclamation must be given as public recreational land to build a series of linear parks



Vision for land use by 2020

- System of parks and gardens in Penang
- System of botanical gardens
- System of public beaches
- System of hiking trails and treks
- System of protected areas for conservation and ecological balance
- Clean and green urban environment



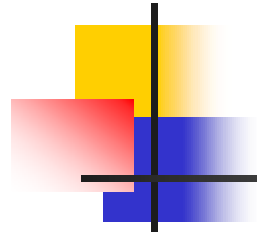
1. System of urban parks and gardens

- By 2020, the amount of land for parks and gardens for Penang is projected at 1400 ha for the island and 1644 ha for Sebarang Perai
- 4 broad groups of parks and gardens
 - Regional parks -80 ha each
 - Town parks -30 ha each
 - Community parks -10 ha each
 - Neighborhood parks – 1 ha each



Urban parks and gardens

Penang	Island	Sebarang Perai
Regional parks- 80 ha	6	7
Town parks- 30 ha	10	10
Community parks- 10 ha	30	30
Neighborhood parks -1 ha	300	300



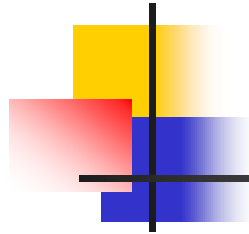
Urban parks and gardens

- Where will these come from?
- Where will they be located?
 - High density areas
 - Available state land
 - Acquired land
 - Developers land
 - Reclamation land



2. Riverside linear parks

- River reserve land through out the length of rivers
- Many proposals of riverside parks by developers as well as by others
 - York road apartments
 - Suffolk house
 - Jelutong
- No implementation or poor implementation
- Potential high at low cost



River reserve land

- All land on either side of the river (50 feet) is reserved as public land
- These land can be converted to be linear parks
- Planting of trees in these areas will greatly increase the amount of trees in Penang
- Trees generally require low maintenance



River pollution and illegal construction along river reserves

- River pollution widespread and uncontrolled
 - Most river contaminated as to be health hazards and preclude recreational use
- Construction of houses, factories and other structures along the river reserves
 - Linear parks proposed in some studies can not be implemented because of these illegal constructions



3. System of coastal linear parks from land reclamation

- Coastal linear parks common strategy for islands to meet public recreational space
- Potential in Penang Island
 - Gurney Drive
 - Tanjung Tokong
 - Jelutong



Coastal land reclamation and development

- Land reclamation potential high as coastal seas shallow and well protected from large waves
- Up to 16,000 ha had been identified in some studies
- Linear parks along sea front offers best prospects for getting park land for Penang Island
- Opportunities for any new land reclamation at Gurney Drive or re-reclamation, such as Jelutong and Bayan Baru



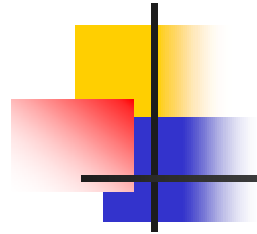
4. System of public beaches

- Identify all public beaches
- Some remaining beaches in Batu Feringhii , Tanjung Bungah and Tanjung Tokong areas
- Provide changing facilities for the public
- Policy of no private development to the beach front needed to keep beaches public



Some issues of beaches and coastal areas

- Private appropriation of public beaches
 - Hotels
 - High rise development
 - Private housing development
 - Restaurants
- Coastal pollution
 - Sedimentation from hill cutting
 - Land base pollution from houses and
 - Hotels, restaurants and hawkers complexes



Use of small islands of Penang

- Conservation of biological diversity
- Recreation
 - Pulau Jerjak
 - Pulau Aman
 - Pulau Kendi
 - Pulau Rimau
 - Pulau Betong



5. System of Botanical gardens

- **Waterfall botanical gardens**

- **Hill botanical gardens**

- **Reservoir botanical gardens**
 - **Mengkuang reservoir for palm collection**
 - **Telok Bahang**
 - **Bukit Dunbar**
 - **Mount Erskine**

- **New urban gardens**



Penang Waterfall botanical gardens

- Only public botanical gardens in Malaysia
- Recently extended by 500 acres
- Function mainly as a public park but had plans for making it into a botanical gardens with botanical, horticultural, educational functions
- Potential for being a center of biodiversity conservation and research
- A number of administrative and financial constraints needs to be overcome



Hill botanic gardens

- **Penang hill botanic gardens**
 - Lower temperature
 - Higher humidity
 - Temperate flowers
 - Area identified but not developed

- **Bukit Chendana**
 - Identified for hill gardens but actually too low for the development of a hill botanical gardens



Other botanic gardens ?

- **Gardens associated with water reservoirs**
 - Mengkuang dam proposed for palm gardens
 - PBA agreed in 1980s but plans not implemented

- **New urban botanical gardens**
 - Potential in Sebarang Perai

- **System of botanical gardens for 2020?**



6. System of protected areas for biodiversity conservation and ecological balance

- National Parks
 - Penang National Park
- Mangrove conservation area
 - Byram
 - Pantai Acheh
- Penang hill conservation area
- Bird and wildlife sanctuaries
- Recreational forests



Penang National Park

- **First national park created in Peninsular Malaysia since Taman Negara in 1930**
- **Small national park created from the Pantai Aceh Forest Reserve fo about 1200 hectares**
- **Includes marine component as surrounding coastal waters includes**
- **Last refuge of plant and animal species of Penang**
- **Development of national park and management plan still in progress**



Mangroves conservation

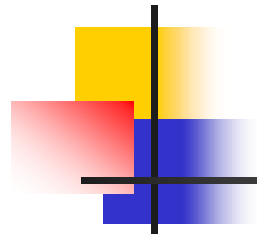
- Most of mangroves already destroyed and developed for other forms of land use
- On island, mainly in the west coast at Pantai Aceh
- In Sebarang Perai, some remnants at Byram, Pulau Burung
- Need to keep remaining mangroves for their ecological role in beach protection and fisheries conservation



Bird sanctuaries

- Most have been destroyed by development
 - Bee-eaters of Ginting
 - Pulau Burung

- Sungai Air Itam



Forest recreational parks

- Rimba rekreasi in Telok Bahang
- Bukit Mertajam
- Pantai Acheh



7. System of walking trails and treks in hills

- **Informal system of walking trails already exists in Penang Island and in Sebarang Perai**

- **Many hills have walking trails developed by residents and regular users**
 - **Penang Hill trails**
 - **Bukit Gambiar**
 - **Pearl hill**



Hill development

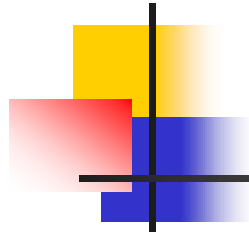
- **Inappropriate development in slopes**
 - Housing schemes
 - High rise construction
- **Illegal clearing of land**
 - Illegal farms
 - Illegal road and track construction
- **Diversion of water from streams and rivers**
 - Waterfalls and rivers running dry

Penang Hill Development



- Concept of converting the whole of Penang hill town as a temperate flower garden
 - Establishment of hill botanic gardens
 - Planting along summit road of flower beds and pergolas for hanging and creeping plants
 - Repair of bridle paths

- Hiking trails up Penang hill from various starting points still popular
 - Repair and maintenance of existing trails
 - Development of new trails



Conservation of Penang Hill

- Penang hill is the largest natural forest left in Penang
- Last refuge of plants and animals
- Endemics and endangered species
- Conservation status of Penang hill ambiguous
- Water catchment, forest reserve, protection forest, etc
- Penang Hill conservation area?



8. Green Cities- tree planting of urban areas

- Many proposals for increase tree planting along road sides
- Advantages well known and accepted
 - Reduce temperature
 - Better pedestrian pathways
 - Noise reduction
 - Soften landscapes
 - Increase property values



Develop a strategy to implement recreational space requirements

- Identify and integrate all proposals through a interdepartmental and multidisciplinary working group within the state to produce an action plan
- Adopt a parks and gardens department at the state level that will coordinate the planning and as well as the implementation of the projects



Costs of non action

- Viable and good options disappear with time or overtaken by events
- If policy on reserving 100 meters from all coastal reclamation had been taken, there would be very good linear parks in Bayan Baru, Jelutong, Tanjung Tokong and Gurney Drive.
- If policy that any land conversion especially on institutional land or open space would require giving part of land public open space, there would be more parks and recreational areas in Gurney Drive, Bukit Jambul and Penang Turf Club



Is there still time?

- ***Vision 2020***

- Fully developed society only 15 years away
 - Popular support from people of Penang for quality of life improvement
 - Federal government more receptive to environmental and sustainability issues and possibility of increased federal funds
-
- Need a change in development priorities and re-orientation of the political agenda

“The problems may be technical, or social or economic, but the solution is political”