



Decentralised Cooperation of Paris

Algiers

Phnom Penh

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The Hamma Garden, an historical garden to be renovated

- Our technical assistance started on 2005 with 2 phases:
 - 2005-2009 garden renovation and re-opening of the garden,
 - 2010-2011 reinforcing the garden capacities (with a co-funding of the French Ministry of European and Foreign Affairs for this 2nd phase)
- When we started our technical assistance, it had been closed for nearly 10 years
- Hamma garden was built in 1832, its current superficies is of 38 ha, but had reached 80 ha in the past
- Three main guidelines of the project were: the Florence charter on historical gardens (1982), Agenda 21 (1992) and Convention on Biodiversity Conservation (1992)

The project process

- Algiers and Paris shared a willing that has prevailed all common recommendation: the promotion and conservation of the Algerian heritage, social and cultural heritage but also natural
- An audit was firstly conducted, with an holistic approach and using management tools (SWOT analysis, benchmarking, strategic activity domains...)
- Old pictures, writings were also looked for to state how was the garden in the past
- Each recommendation was fully discussed with Algiers

Garden renovation

- Natural aspect of the garden was reinforced during the renovation:
 - management was differentiated according to the public uses,
 - high borders alleys were replaced by low profiled borders,
 - cars were no more allowed in the garden
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- Soils permeability was improved by replacing the bitumen by a locally produced permeable material in all the alleys
- Light pollution was reduced by replacement of all the lamposts in order to direct light only to the ground



The Ficus alley renovation





The French-style garden renovation

Water management

- The traditional seguia system was rebuilt in the English-style garden
- After an hydraulic expertise, all wells were rebuilt in order to water the garden by water unsuitable for drinking (drinkable water was initialled used)
- Plants with low water needs were recommended and used when possible
- The rameal fragmented wood has been recently experimented: it has significantly reduced water consumption on the tested parcels

Biodiversity conservation

- Native plants collections for conservation have been created
- A program for combating invasive plant species has been conducted
- Germplasm banks has been built:
 - a seed bank
 - an in vitro culture laboratory
- The mowing frequency has been reduced to promote regeneration of native plants
- A compost area – the first one in Algeria – was built and the garden doesn't buy any more chemicals fertilizers.



Biodiversity education

Creation of a school for environmental education

Rehabilitation of the school of horticulture

Creation of a kitchen garden for kids
Publication of books on native plants

The first one is to be published at the end of this year on the native flora of the Chrea national park, a focus will be given on endemic species and traditional uses of the plants



Courses on native plant identification

- 4 courses in total
- 2 of each during 1 week
- Staff from the Hamma garden and the Chrea National Park



Reinforcing the national capacities

- In order to built a national network for biodiversity conservation, conventions had been signed between the Hamma garden and all the National Parks:
 - each park has its own plant collection in the garden
 - seeds collected in parks are stored in the garden seed bank and proposed in a common index seminum
 - when courses are organised for the garden staff, it is also opened to the national park staff
- The Hamma garden is actually a Botanic Gardens Conservation International member
- An international conference on biodiversity conservation has been held in the garden
- The Hamma garden staff has been trained by the City of Paris Green spaces department:
 - courses on native plant identification have been held for the Hamma garden staff in, and with the collaboration, of the Chrea national park
 - other courses have been also held in Algiers on eco-education, tree management, plant production, living collection management
 - Algerian staff have been welcomed in Paris

Phnom Penh

Improvement of the tree and garden management with respect Cambodian uses.

This work had been conducted for 3 years (from 2007 to 2010) and was part the technical assistance from Paris to Phnom Penh initiated from 1990.

The first phase of the project concerned urbanism recommendations : car traffic and parking, drinkable water distribution and water purification

A better knowledge of the plants for their better management

- A computerised tree phytosanitary statement was established in Khmer and French
- A field guide on the “Garden plants of Phnom Penh” was published in both languages and gave information on their growing and use specifications.

An improvement of tree and garden management taking into account environmental concerns

- The capacity of plant production was estimated according the annual needs
- Water management was improved by using tensiometers that calculate water content in the soils that are irrigated by drinkable water. Water consumption was reduced by 10 times.
- A compost area was built and waste plant material could eventually be recycled. Previously, the city has to buy the compost and to pay the recycling of waste material.

Because of the wet tropical climate, the compost area has to be protected from the rain and needs to be built on piles to avoid water accumulation



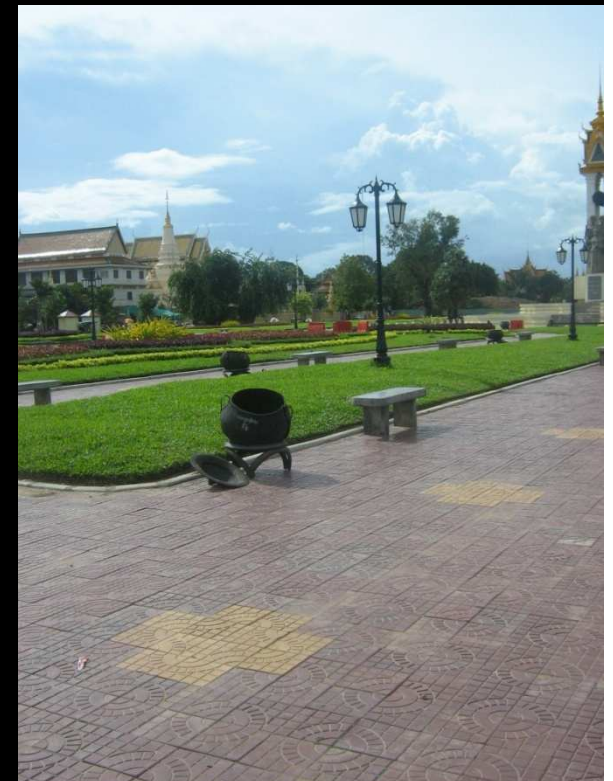
Renovation and creation of gardens

- The French-style garden construction is well known
- Since the country is secure and peaceful, people enjoy visiting the gardens
- Garden uses are numerous and had to be taken into account during its conception. For example, more shading trees must be planted.

Plant diversification is improved while French-style garden commitments are kept



Benches, bins and streetlights have been put in gardens. Bins are made of recycled tyres.



To protect and maintain the trees

- **Problems need to be listed.** Trees were chopped down by the Khmers, car parking is currently so disorganized that cars park between the trees, street works are conducted without taking care of the trees...
- Wood-cutters had to be trained in order to have a good tree maintenance, but also other technicians who conduct street works (tree root protection)



Some examples of tree protections

Training courses on safety equipment (harness...)

Pruning was made without any safety equipment



In conclusion, a productive and friendly teamwork !

