



United Nations
Educational, Scientific and
Cultural Organization



World
Heritage
Convention



Ministry of Education, Culture and
Science of the Netherlands

From **A**stronomy to **Z**anzibar

10 Years of Dutch Support to World Heritage



Planning for the Conservation and Development of Historic Cochin in Kerala, India

By Cristina Iamandi, Conservation Architect and Planner, In Situ Design in Bucharest, Romania, and Chitra and Biley Menon, Architects, Idea Design in Cochin & Bangalore, India

Brief description and history of old Cochin

Cochin originated as a fishing village of minor significance in the Kingdom of Cochin, but the Malabar coast was already known by Greco-Romans and other Western travellers and traders in the early period of trade and commerce. Cochin only emerged as a major trade centre after the flood that followed the ravaging tsunami of 1341 which destroyed Cranganore, the ancient harbour city situated further north. Transforming Cochin into a natural harbour, the flood resulted in a shift of attention from merchants of Cranganore to Cochin. Eventually Cochin became a bustling town attracting populations from other regions of India, as well as Arabs and Chinese. Prior to the establishment of the first Western European trading posts in the sixteenth century, Cochin was already a prosperous town, well known in the Arabian Sea region for its spices, cashew nuts, tea, coir, handicrafts, and so on. Its strategic location and abundance of goods attracted rival European colonial powers to take possession and keep Cochin under control for 444 years.

The colonial period started in 1503 when the Raja of Cochin granted permission to the Portuguese to build a fort to protect their commercial interests. Behind this fort (Emmanuel Kota), the Portuguese built their settlements and churches, first in wood and later in baked brick structures. Cochin remained in the possession of the Portuguese for 160 years, until 1663.

After Rijcklof van Goens' decisive battle against the Portuguese, the Dutch captured Cochin in

Since ancient times, the port city of Cochin has been both a place of tolerance and a thriving trade centre.

1663 destroying great sections of the Portuguese settlement. Many Catholic institutions such as churches and convents were demolished or converted into Protestant churches. The Dutch held and possessed Fort Kochi for 132 years until 1795 when the British took control by defeating the Dutch. Under the British regime, many religious structures were built such as temples, mosques and churches, as well as important public buildings and several upscale residences.

After 1947, the year of India's independence, major administrative changes took place. The Kerala State was established in 1956, in 1966 the Joint Town Planning Committee was set up, and the Corporation of Cochin was established in 1967, with the Cochin Town Planning Trust subsequently instated. Finally, in 1976 the Greater Cochin Development Authority (GCDA) was established.

Cultural significance of Fort Cochin and Mattanchery

Since ancient times, the port city of Cochin has been both a place of tolerance and a thriving trade centre, part of a broad mercantile system that epitomized the early development of global trading and cultural cross-fertilization throughout the different regions of India, the Arabian Sea, the Indian Ocean, and later Europe.

The singularity of old Cochin resides in the coexistence of the 'Indian' city with the 'colonial' city; complementary entities tightly linked throughout history in a single urban agglomeration. Ruled by Maharajas and Divans, the place developed as a fusion of Indian, Arab, Jewish and Western European cultures reflected in a significant and complex urban form where rich historical layers are superimposed on a very intricate and ever changing social and ethnic pattern. The three main urban areas Fort Cochin and Mattanchery, linked by the coastal trade strip, together with Fort Vypeen, bear witness to the development of one of the major trading centres in India from the fifteenth to twentieth centuries.

The network of linkages between communities of diverse cultures and religions, driven by trade and commerce related interests, have crystallized into a rich composite culture interacting with the

surrounding natural environment and creating a thriving and bustling, green city. The city still maintains an exceptional environmental quality that has been lost in mainland Cochin. The 'tropical village' character of the historic city, animated by its diversity and rich community life, are distinctive features that should be preserved and enhanced by the future plan, alongside its built heritage.

Characteristics of the site

Location, geography and climate

The location and geographical characteristics of Cochin, comprising mainly of lowlands along the sea coast and backwaters, and naturally drained via backwaters, canals and rivers, greatly contributed to the formation of the first urban settlement and its subsequent development. Its peculiar location in the basin of the Arabian Sea within the Indian sub-continent and Kerala made Cochin a strategic and favoured place for the development of an international trade centre. Moreover, Cochin has a tropical humid climate and fertile soil resulting in luxuriant tropical vegetation; natural assets which both the indigenous society and the former colonial powers took great advantage of.

The urban plan

The urban plan of the heritage zone includes the planned area of Fort Cochin, of European colonial origin, and the un-planned town Mattanchery, which is older and predominantly Indian. It consists of a few remains of military works, the street pattern and plots, the main functional poles, and the city's main landmarks. The heritage zone of Fort Cochin and Mattanchery comprises several distinct morphological units:

- ▶ The former planned Dutch colonial fortified town.
- ▶ The remaining Portuguese colonial town left when the Dutch built their fort.
- ▶ The oldest Indian town core.
- ▶ The coastal area of the backwaters.
- ▶ The fringe-belts of the Dutch town and the former Dutch East India Company (VOC) gardens, which were urbanized in the nineteenth century.
- ▶ Areas of twentieth century urbanization.

These units correspond to various periods of development, building style or functional use, varying in size and complexity and heterogeneity of the elements. The city's complexity came about as a result of adaptation, alteration and partial or total replacement of elements such as plots, blocks, frontages or townscapes.

The street network of Fort Cochin and some parts of Mattanchery are well preserved with most areas dating from the sixteenth and seventeenth centuries. A continuous old road follows the backwater coast and goes across Fort Cochin (Church Road), continuing along the seaside, ending in a point¹ situated in the Veli Ground where another main axis, corresponding to Calvathy canal, converges (T.M. Mohamed-Amaravathi Road). Fort Cochin inherited the Dutch colonial street network, which extends to the coastal area of Mattanchery where the shipyard was located and business took place. Conversely, Calvathy quarter inherited a more irregular network from the first Portuguese settlement shaped by the presence of three canals.

Inland, a rather regular, rectangular network is structured by three east-west parallel axes: Pullupalam Road; Palace Road-Cheralai Road, which links Amaravathy Temple and Mattanchery Palace; and Manthara Road, at the southernmost limit of the heritage zone. The structuring north-south parallel axes include the road alongside the canal line, as well as Gujarati Road and Mohammad Abdul Rahman Road (running between Palace Road and Bazaar Road), and Moulana Azad Road (parallel to Jew town on the western side of the Palace).

The shape and size of the plots varies considerably depending on the urban development phases, landuse and location. Areas where tiny plots are concentrated include the Muslim areas of Calvathy and Kochangady, a section of T.M. Mohamed Road north of Veli, and a block in the Kokers Junction close to Cheralai market; all of which are densely populated areas.

Fort Cochin has an airy fabric with rather regular medium to large plots, which experienced minor, insignificant change. The 'Indian' core developed around the palace and the main temples, adjacent to the main commercial strips (Gujarati and Bazaar roads) and Cheralai market. It alternates with very

large and very small plots with a recurrent square shape. The predominant large square plot of Thirumala Devaswom Temple is in the heart of Mattanchery, with the temple land surrounded by large plots, though some of these have sub-divided in the last century.

The trading and commercial architecture

The trade and commerce that made Cochin both famous and prosperous was concentrated in a stretch of the backwater coastal area from the Calvathy canal to Kochangady area where the oldest mosque in Cochin is located (926 Hijra calendar, 1519 AD). The area encompasses the famous Bazaar Road, the Boat Jetty Road, Jew Town Road, and Kochangady Road, and their trading offices and godowns, retail commercial structures, and a variety of mixed structures combining offices, warehouses, shops, factories and courtyards.

The typologies found in this area are unique and not found in any other Indian city or former colonial city anywhere in the world. They reflect the sequence of a functional chain linking canals to backwaters. The movement of goods from the growers to the ships, which include an intermediate series of operations and related facilities such as loading/unloading, storage, weighing and packing, involve middlemen and Indian and European traders who negotiate in trading offices. Adjacent to the wholesale, the area also includes retail commerce.

Other historic commercial strips are of great heritage interest in old Cochin, including Palace Road, the main street of Mattanchery, and Gujarati Road and Palace Road. Although primarily commercial, they display a large variety of mixed-use residential and retail building typologies.

The religious heritage

Old Cochin has an impressive religious heritage. The presence of Hindu, Jain, Buddhist temples, mosques and madrasas, synagogues, churches, convents and cemeteries in a relatively small area bears witness to the coexistence of multi-ethnic and multi-religious communities, forming a mosaic society for more than six centuries. The successive building (and rebuilding) of these religious structures indicates the shifting of the different population groups to Cochin from India and elsewhere, while their location shows

¹ This point could be found on ancient Portuguese maps and later on Dutch East India Company maps.



where the related communities were settled and the interactions of the different groups. There is also a close connection between the character of a quarter and the religious buildings found within it.

The domestic architecture

Domestic architecture is characterized by an eclectic blend of various architectural typologies, including Kerala's traditional vernacular architecture, imported Indian typologies such as Gujarati *shawl*-type or Tamil *agraharam* type, as well as adaptations of vernacular and high traditional architectural types of European colonial origin – Portuguese, Dutch and British – from different periods and styles.

The main characteristic of the traditional architecture is the assimilation of indigenous and imported architectural styles, techniques and materials, which has resulted in a rich and unique architectural expression that is perfectly adapted to the climatic conditions and lifestyle of Cochin. The use of the same materials (baked brick and lime, timber and clay tiles), similar roofing (gabled or hipped with a similar slope between 40° and 50°), the same mass (single or two storeys in height) were the common denominators in the creation of a unified, harmonious urban landscape that remains pleasing to the eye, despite its heterogeneity.

NFiT Project: Planning for the conservation and development of Fort Cochin – Mattancherry Heritage Zone

Initiated by UNESCO New Delhi in November 2008, assistance by UNESCO consisted of a preliminary project aimed at outlining a framework of strategic decision-making for the development of the Fort Cochin-Mattancherry-Fort Vypeen Heritage Zone. The comprehensive project report was intended for use by a local team of professionals as a 'road map' to establish the Conservation and Development Plan for the Heritage Zone of Fort Cochin, Mattancherry and Fort Vypeen. The project was implemented within the framework of UNESCO's extra-budgetary activity of the

Indian Heritage Cities Network (IHCN) funded by the Netherlands Funds-in-Trust (NFiT) under the overall authority of the director of UNESCO New Delhi office.

The activities carried out by the team of international and national consultants (the authors) included two field missions to Cochin in 2008 and 2010 as well as meetings with national experts, state and city officials, public representatives and civil society organizations with a view to present the project and its objectives, to identify the planning, management and legal issues related to urban conservation, and to understand local priorities. In particular, these missions were primarily intended to collect the necessary data relevant to the development of the conservation and development plan, to develop a reliable database for analysing the urban transformation of the Fort Cochin and Mattancherry Heritage Zone, and to conduct a pilot study to 'simulate' the phases of the conservation planning process as well as 'sample' the outcomes of the plan.

The main outcome of the project is the 'Fort Cochin and Mattancherry Heritage Zone Conservation and Development Plan Outline Report', a document explaining the method used in preparing the detailed planning document as well as the necessary implementation mechanisms. The report also provides a draft 'Interim Control By-Law' and guidelines on conservation, architecture, urban design, signage and infrastructure works, as well as a 'green plan' and a 'lighting plan'. These temporary documents of a more general nature would facilitate control of building and site-planning activity during the plan's preparation.

The Pilot Project Report, the last part of the final project report, provides a sample of the conservation planning methodology, its main components and graphic outcomes, including the historical documentation of the pilot area, architectural surveys, GIS inventory, analytical maps and drawings, draft regulations, and the plan's (legal) maps.

The project report includes in appendices historic maps, thematic maps showing the geographic distribution of survey data, reference maps, architectural surveys, hand-drawings and old photographs – used for analytical purposes. The report ends with conclusions and recommendations related to the sustainable management of the

heritage zone in general and for the preparation and implementation of the plan in particular.

Outline of the conservation and development plan

The lack of appropriate tools to guide and control building activity, or any type of project that seeks the modification of the existing environment within the protected heritage zone, inevitably leads to the erosion and gradual loss of cultural values, which seriously impacts on the site's economy and environmental quality. The recent significant investment flowing into the historic city of Cochin from local and foreign sources has had an overall negative impact on the historic environment. The recent ad hoc development within the site, which was mainly tourism-driven, did not take the local context into account and therefore it did not contribute towards solving the real problems of the city. Furthermore, the imbalance between the different urban functions has increased such that the integrity of the historic areas has been seriously compromised.

The project proposes a framework of strategic decision-making for both the development and conservation of the designated heritage zone based on the identification of its assets and their condition, corroborated with a functional diagnosis of urban functions.

The Heritage Zone Conservation and Development Plan is based on thorough documentation and analysis of the site and its cultural values, as well as the future challenges to be faced by identifying key issues, opportunities and risks. It provides guidance and the control of development in a sustainable way that seeks to prevent the loss of cultural assets and environmental quality in the heritage zone. In this way, development is more qualitative than quantitative, and takes full advantage of the economic benefits of heritage conservation. This detailed plan will be integrated into the Kochi Development Plan and coordinated with other policies for housing, economic development, employment, transportation, and so on.

Approach

The project embraced the Historic Urban Landscape approach, which considers the 'historic' as a whole,

not as a mere collection of listed monuments to be preserved through conventional conservation methods applied to sacred religious buildings, palaces and other outstanding buildings. These methods are neither pertinent nor effective on the vast majority of the urban fabric – the constantly changing 'vernacular' architecture, which requires an approach based on economic regeneration, physical rehabilitation, and adaptive reuse. This policy must consider the rehabilitation and enhancement of the built environment and the restoration of monuments as a priority, but it should also welcome development by effectively addressing the residents' needs for improved housing and favouring investment in compatible activities. The plan should therefore allow for that particular type of change and modernization that respects and enhances the heritage values of the site, intrinsic to the traditional Cochin urban culture manifested in such physical attributes as the spatial layout, architectural typologies, materials, and construction techniques.

Furthermore, the choice of a values-based approach is justified by: i) the sensitivity and complexity of any composite/mutual heritage; and ii) a mixed perception of the historic city of Fort Cochin – a former colonial town – by its inhabitants and authorities. It takes into account the diversity of interest groups with a stake in its protection and allows for the recognition of other values (for instance, social and economic, and intangible) in addition to the traditional ones (historic, aesthetic, scientific).

A good heritage conservation strategy that associates both tangible and intangible assets within an integrated approach – creating a smooth continuum between them – is encouraged. The intangible heritage of Cochin is extremely rich and includes art, dance, music, and so on, expressed through festivals, performances, and other aspects of local culture and religion. These forms of assets are unique in terms of the heritage value they individually represent, but also as an intrinsic part of the local cultural fabric alongside the tangible aspects of heritage. Hence, the plan will pay due attention in safeguarding the neighbourhood communities and bearers of vibrant urban traditions and social forms; the likely candidates for urban development and renewal. As cultural sites are increasingly tied to urban branding strategies, and property prices are driven upwards by its proximity

to heritage core areas, these communities no longer fit into the 'authorized' vision of the city's future. The proposed approach is to save the neighbourhood communities from the 'cleaning up' plans by valuing them as 'cultural spaces' in recognition of their intangible heritage value.

The Fort Cochin-Mattancherry Heritage Zone Conservation and Development Plan will be consistent with the city's region-wide orientations established by the 'Development Plan for Kochi Region 2031', and will integrate physical, functional, socio-economical and cultural issues with the protection and enhancement of heritage.

The programmes and projects that translate this urban strategy relate to the renewal of depressed neighbourhoods, the conservation of decaying buildings, the reuse of vacant and abandoned properties, the improvement of infrastructure and re-design of public space, and the improvement of circulation and connectivity between the different parts of the historic city and mainland, and the enhancement of the natural environment.

Content of the plan

The Conservation and Development Plan is a specific urban planning tool to replace all of the existing planning documents and building regulations for the territory, and contains a series of statutory and non-statutory documents that complement each other. The preparation of the statutory documents was based on an exhaustive 'operational' inventory, studies, surveys and mapping, and an elaborate analytical phase.

The essential statutory documents, regardless of the plan format, include: i) the 'Conservation

and Development Plan's Map' (the Graphic Plan), which indicates the classification of buildings and open spaces and their corresponding categories and types of intervention, the future evolution of public space and green areas, the parameters of new development, and the special projects for sensitive or strategic areas; and ii) the 'Regulations', a statutory document which relates to the above map. The Regulations identify the properties and their different degrees of protection, for which different modifications are imposed or permitted, as well as the properties where demolitions may be imposed in order to implement projects of public or private interest. All the interventions on protected buildings are submitted to special authorization by the concerned administration, according to the procedure of the building permit or other special procedures in cases where the building permit is not required.

The 'Draft Regulations' prepared in the framework of this project imposes an efficient control of the building activity, which contains provisions relative to the permitted building height (a 'Height Map' is a complementary statutory graphic document), the placement of the building within the plot (with respect to the public space and to the side and rear plot boundaries), and to the other buildings on the same plot, as well as other provisions that ensure the harmonious integration of the new development within the existing built environment of heritage interest. In addition, the graphic plan indicates plot-by-plot the extent of permitted development on vacant plots by indicating the mandatory footprint, with or without variable limits, and the protection of certain courtyards or private green spaces, and so on.

The historic urban landscape of Cochin.



Temporary regulations

The preparation of the conservation plan and development plan generally requires a long-term effort, with the site in urgent need of a tool to manage the conservation and development activity within it. It was therefore necessary to establish a more general, temporary regulatory framework, the 'Draft Interim Control By-Law', which was intended to stop the ongoing degradation of the urban fabric and guide the conservation, building, and site planning activities.

In this regard, some urgent measures have been proposed, constituting a preliminary step towards the establishment of the 'Conservation and Development Plan'. These priority measures concern:

The outline of the 'conservation zones' in order to establish basic landuse provisions (subdivision, siting and design of new buildings, conservation of the buildings' heritage characteristics, preservation of green spaces, parking, utilities, site planning, and so on).

- ▶ Procedures for the delivery of building permits.
- ▶ Draft guidelines on conservation, design, urban design, infrastructure works, lighting, and signage.

Based on the comparison between older maps and the present situation, showing distinct transformation processes, three types of urban fabric, characterized by different heritage values and mechanisms of change, have been identified:

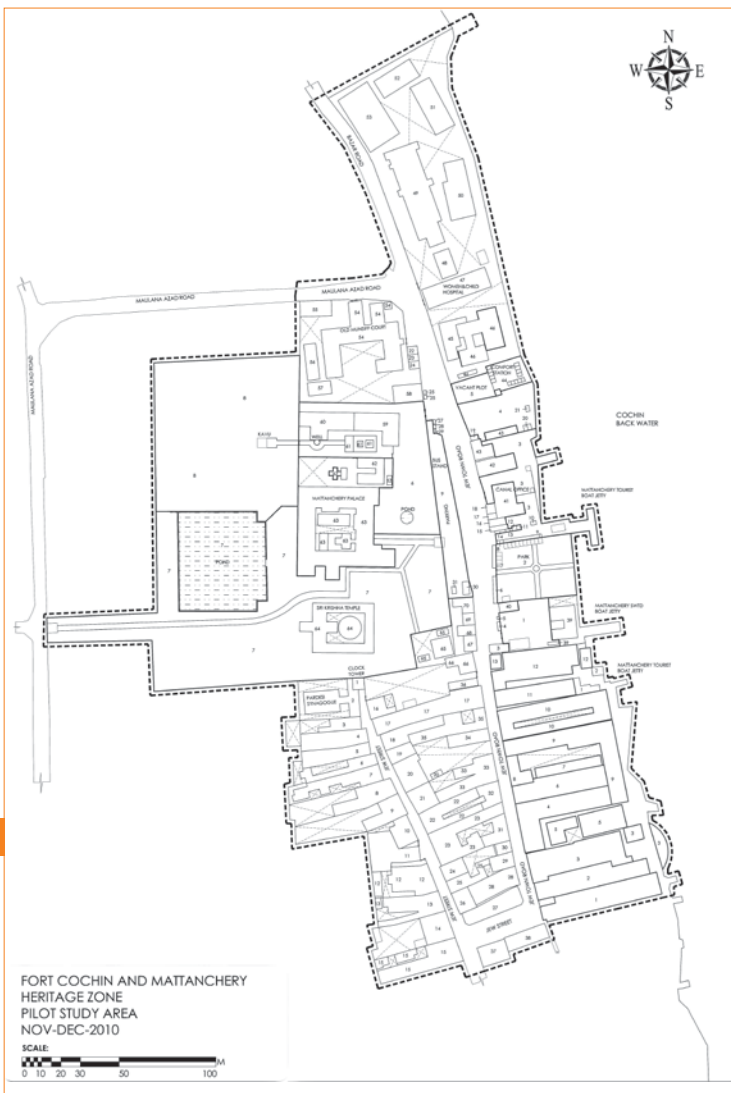
- ▶ 'Sectors with exceptional heritage value' that have retained their urban planning, building integration and landscape qualities, and that include homogeneous architectural ensembles,

building alignments of heritage interest, and zones united by architectural typology. These areas, recognized as historically significant, are characterized by formal and functional harmony, and experience relatively few disturbances. Restoration and rehabilitation would be the predominant intervention types.

- ▶ 'Sectors of heritage interest', whose urban framework has been partially modified, have been subject to a number of disturbances and include, next to several buildings and environmental characteristics with heritage value, structures that are poorly integrated within the whole. If improvements are undertaken on certain areas of less satisfying architectural or environmental condition, it may be of interest to include the restoration/rehabilitation of significant properties, and upgrading of contributing properties.
- ▶ 'Urban ensembles of interest', featuring a certain homogeneity of architectural characteristics, despite a significant number of disturbances, include urban development of the twentieth century characterized by varied building materials, arbitrary setbacks, and the various architectural styles. Predominant building activities would mostly concentrate on infill, reconstruction and redevelopment.

In the framework of this project, these areas have been roughly identified based on the available data so as to establish appropriate planning measures and regulations which would take into account the different specific values and conditions of each area. Their final delimitation requires the GIS inventory and analysis of the entire territory of the heritage zone.





The pilot area includes the Mattancherry Palace, the Women's Hospital, the northern part of Jew Town Road, and the Synagogue Lane. Selection criteria include sampling different architectural typologies from different periods: colonial and indigenous, monumental and modest, designed and vernacular, public and private open space, green and mineral, alterations and new additions to historic buildings, presence of mature trees, more than one ethnic/religious group, remarkable heritage elements – as to illustrate most entries of the survey form and legend of the conservation and development plan.

Development of the conservation and revitalization plan – tasks executed

The objectives of the project have been fully attained. In addition, supplementary documents have been produced to provide local authorities with all the necessary elements to take further decisions related to the long-term management of the heritage zone, and to allow the control of interventions during the planning process.

In particular, the project outcomes included the following:

1. Establishing the draft regulatory framework of the conservation plan:
 - ▶ Identified the 'historic' (colonial/indigenous), 'transitional' and 'modern' fabric, based on the comparison of the available maps of the 1960s through to the 1980s and 2008, and outlined the perimeters of the 'conservation zones'.
 - ▶ Prepared a Draft Interim Control By-Law.
 - ▶ Produced an updated, accurate base map of the pilot area, making the streets, plots and buildings, as well as boundary walls, clearly visible.
 - ▶ Conducted a comprehensive inventory of all built structures and open spaces of the pilot area.
 - ▶ Entered the information of the survey into a GIS-database.
 - ▶ Prepared thematic maps on the different 'entries' of the survey sheet.
 - ▶ Defined the protection level and corresponding permitted category of intervention for each property in the pilot area.
2. Developing guidelines on conservation, new construction, urban design, infrastructure works, lighting, and signage.
3. Developing a 'Green Plan' to manage the natural environment of the heritage zone.

Conclusions

The project report brought together findings from site visits and from discussions with local authorities and stakeholders. It assessed the current conditions of the 'heritage zone' of Fort Cochin and Mattancherry with a view to preparing an effective tool for the protection and conservation of Cochin's historic heritage as well as its harmonious evolution. The final step of the UNESCO NFIT project was to prepare an outline of the conservation plan as well as a set of temporary regulations and guidelines to manage the historic city during the preparation of the special plan.

The predominant message of this project is that the residents of Fort Cochin and Mattanchery should remain the principal and most important beneficiaries of urban conservation planning, and not the visitors. The main goal is to create a better living environment for work, recreation and tourism, making their citizens proud and strengthening their sense of belonging in this distinctive place worth preserving for future generations. Ultimately, this would have a beneficial impact on tourism development as well.

The initiative to develop a proper tool to manage the heritage area is very admirable, but has turned out to be challenging, as important development decisions have already been made and partly implemented. At that time, heritage was not considered a priority and is still seen by many decision-makers as an inconvenient obstacle to free development. The historic city has lost some of its integrity as a result of the indiscriminate demolition that took place in the last decade, while its authenticity is threatened by inappropriate recent renovations of historic buildings and features, mainly for tourism purposes. Major changes to land use are currently taking place, mainly in Fort Cochin where residential areas are converted into commercial areas, tourist accommodation and restaurants.

Moreover, even if the city were to recover, thanks to an effective and well managed conservation plan, its surroundings might be irreversibly affected by

the developments in the vicinity. Within the current legislation there is no provision for 'buffer zones', which would offer restrictions on their use and development and so provide an additional layer of protection to the site.

The Mayor of Cochin acknowledged the critical condition of the historic city of Cochin and decided to develop a special plan to conserve and manage the heritage zone of Fort Cochin and Mattanchery. It is the Corporation of Cochin's responsibility to further develop this plan and to manage the site as quickly as possible based on the outline provided by UNESCO consultants and the 'Interim Control By-Law' and guidelines.

National and local government in India increasingly recognize the potential contribution to development made by the complex and intricate array of historic buildings and infrastructure that form the core of most cities and towns in India – generically referred to as 'living urban heritage'. Although neglected for many years, this living urban heritage has started to be rehabilitated and revitalized by enlightened communities that not only are discovering its cultural and historical value but also its economic potential. Conservation and development efforts have started to move beyond the promotion of tourism and seek typical urban development objectives. The Cochin initiative is a true reflection of this new attitude.

Cochin fishing nets, originally introduced by the Chinese before European colonization.

