



Figure 1 Kanadukathan oorani (photo by M.SINOU)

PART 3

PROTECTING THE CHETTIAR TRADITIONAL WATER SYSTEM

Content Part 3/3

❖ Exemple of challenge in Heritage protection of Chettinad	5
A. The tank : a traditionnal water system	5
Definition and presentation of this traditionel system	5
A watersystem included in the Unesco tentative file	7
A. Modern uses and maintenance	8
Differents sources for different uses	8
Maintenace	11
B. Specific issues.....	14
C. Future of this water system	Erreur ! Signet non défini.
Future government project	Erreur ! Signet non défini.
Is Heritage classification a solution to keep alive this system ?	21
❖ Conclusion	21
❖ Bibliographie	22
Academic works :	22
Articles	22
Books.....	23
Museum/Workshop place	24
Talk/ Recording	24
Website	24

Video	25
❖ Annexs.....	26
Chettinad, Village Clusters of the Tamil Merchants : Tentativ List File	26
Format for the nomination of properties for inscription on the World Heritage List.....	37
Nomination file : missing elements	Erreur ! Signet non défini.

❖ Exemple of challenge in Heritage protection of Chettinad

A. The tank : a traditionnal water system

Presentation of this traditionel system

A rain water system specific to the region is the the network of the erys (or kanmoils). The erys are the traditional surface water storage reservoir found in tamil nadu organized into a huge network over the age. They have play a major role in low rain area such as chettinad.

Due to a high climate constraint the Chettiarss have been involved in sustainable water management for agriculture and domestic uses, shaping the landscape

An ery is a reservoir of water contained behind earthen embankments. The bund surronds the water on the main sides. The other sides are open to the catchment from which water flows down to collect in the ery. The village drainage acording to the terrain also feed the lake. The water reaches the field by gravity flow across the bund through openings. The middle of the ery is the deepest part which recharge the water table.

The maintenance of the erys was traditionally depending on the community management. The maintenance consist in deepening the water body (removing the silt) and maintaining the bund.



Figure 2 Ery in Kothari (photo by C.BUGEIA)

The oorani is a tamil word for the surface water storage tank located in the villages and towns. In Chettinad each village comprises a minimum of three water bodies in accordance tot the needs of inhabitants.

The villages ponds have also the role of recharging the water table from the lower point of the water bodies. Due to their settement in a hot and arid area the Chettiars have taken this in consideration. The sloped roofs of their mansions are designed to harvest water in the courtyards and then divert to the various differents ponds through a water drainage network.



Figure 4 Oorani in Karaikudi (photo by M.SINOU)

In Chettinad two types of drainage network are visible. Kanadukathan has the most representative one. The water harvested on the roof of mansions goes to the reservoir pond using a channel drainage network.



Figure 6 A channel in Kanadukathan (photo by M.SINOU)

The channels are following the outdoor walls of the mansions through the village.

Pallathur is the second example of a different network. There is no channel drainage network there. Harvested water goes directly to the streets from the roof of Chettiars mansions.



Figure 3 A street in Pallathur (photo by C.BUGEIA)

The streets follow the natural north-south slope which allows the water to flow in the water reservoir at the end of the village.



Figure 5 Water supply channel in Kothadi (photo by M.SINOU)

Water flow in the tank by a water supply channel, at the top of stairs (on the right on the photo)

A watersystem included in the Unesco tentative file

Chettiars found a way to build their villages and houses accordingly to the hot and arid environment.

The water system that they have put in place is a clever engineering using their knowledge in architecture, water management and irrigation. This water management system is a part of Chettiar heritage and pretty unique in Tamil Nadu because it synthetise the traditional Tamil way to harvest rain water in erys and the specific architecture of the Chettiars mansions.

The water system is included in the UNESCO Tentative file for its physical properties, how it shapes the landscape and *“They have shaped together with the local agrarian communities a specific landscape which is today a green and attractive area which hosts migrating bird species a part of the year after the monsoon, in the vicinity of the Gulf of Mannar. This landscape is made of an alternation of lakes lined by bunds planted with different species of trees, of agricultural lands, and of forests and ancient sacred groves”* (UNESCO Tentative List, file of Chettinad).

B. Modern uses and maintenance

Different sources for different uses

There are two types of water bodies when we talk about localisation. Some are outside cities and villages and are used for irrigation purposes: the *eris*. The second ones are inside the villages and cities and are used for domestic purposes: the *oorani*.

Here we will mainly discuss about *oorani*, because the first one is well documented and is the subject of a lot of national and local projects.

The tanks located inside the urban landscape have different purposes, connected to the daily life of inhabitants. There are used for, in order of importance :

- Bathing
- Washing clothes
- Washing floors
- Fishing
- Playground
- Cooking water
- Temple
- Drinking water

These uses coexist in the public space. There are some traditional separations that we were able to observe in Chettinad.

For example, some areas are dedicated to washing clothes and bathing, some others for fishing.



Figure 7 : Separation of the use left : bathing, right fishing

There will also be a separation between men and women. Often men will bathe during the day and women will bathe at dawn and dusk. Both wash their clothes in the same time they took their bath. Sometimes men are using one side of the tank and the women the other one but they will not bathe in the same time.



During the day, women take water from the tank to clean the floors of houses and temples. Sometimes they use rainwater to do that too. It will be the same for cooking water, except some people have well for that purpose.

Fishing was a way to make money to maintain the tank in the past. The only fishermen we met, were fishing for their own benefit. They fish once a week in the same tank with nets. They will sell their catches on the same day on the market.



Figure 8 Men fishing in one of the tanks in Kothamangalam

Some groups of young boys (6 to 21 years old) play around the tank and in the water during the day. It is a place of gathering where they are able to play freely. We never saw girls except during bath time.

The water is also used during festivities to clean temples and their religious icons. Spices and herbs will be added before use.



Figure 9 (Up and down)Oorani in Koviloor (photo by M.SINOU)

These water bodies have no restrictions : animals are using them, some solid waste can be found around it and inside the water.

The water bodies used for drinking water are special : there are surrounding by fence et kept clean by the municipality. There is a traditional way to take the water from the tank : only the water from the top of the water body is taken because the sun has already kills a lot of germs from it.



Figure 10 Oorani in Kothamangalam (phot by C.BUGEIA)

The majority used the public tap in the street to get drinking water. There is almost a tap by street and water is deliver 2 hours per day. They have to pay 50 roupies a month (and 100 for a shop) to use this water. They boiled it before use.



Figure 11 A public tap in Kothamangalam (photo by C.BUGEIA)



Figure 12 A well in the third Chettiar courtyard in Karaikudi (phot M.SINOU)

The majority of the Chettiars mansions has a well located in the last courtyard (the second one or the third one for the biggest palace). They will use this water to drink, bath, clean floor and clothes and cook.

Nowadays the members of the house will not drink anymore this water, preferring to buy packed water or using the public tap.

But the water from the familial well is an indispensable element during the functions and festivals.

A few people have personal borehole and take all their water from there. According to a family we met, it has costed them 50 000 roupies to get one. They have to change the motor every 5 years.

To have running water directly to their houses, the owner has to pay the connecting from the street to his house. Afterwards he will pay his bill directly to the water corporation.

Maintenance

During our administration staff interviews and some researchs we find that havinfg a water department is not an obligation for municipality. Also often one or two persons are volunteers to work on water subject. For exemple the water specialist who

answered our questions was the Electrician operator in Devakottai and the computer operator in Kanadukathan.

We asked them who maintain these water bodies, how and how often. In the majority of case, they only maintain the water body used for drinking water. In Kanadukathan they make chemical analyses of the water every month and clean it with chlorine every 15 days.

They will remove the silt from the bottom every 6 months and will control the streets sewage systems every 6 months too.

To avoid to have solid waste close to the water bodies, streets and channels are cleaning by a municipal team every 15 days.

Water bodies are fill with rain water directly and water from the Chettiar mansions. In fact rain water from the roof of mansions is supposed to be collected in the courtyards and then fall into the channels in the streets to a water collecting body, often at the end of the village.

We wanted to know who has to maintain these channels, which are on the edge of each property line. So we asked municipalities staff about it. In some cases they told us that they were responsible of the channels and some others cases, the opposite was told : owners of the mansions were responsables for their maintenance.

Then we asked the same questions to Chettiars to know how and how often do they maintain the channels system.

They all say to us that they don't clean or maintain it because it was the municipality task or the system doesn't need to be maintain because it is clever engineering system made by th ancients and the first rain will clean it.

Despite the lack of conceration and communications some plans are underway to maintain them.

Municipality projects for the maintain of the ooranis

Ooranis are managed localy by the municipality. Also each municipality has it own project concerning their management and maintenance.

During our time in Chettinad we were able to learn or watch 3 different project.

In Rayavaram the main ooranis were strengthened by concrete walls. Grass was put around the water body and the area is cleaned every day. The water proofness of the water supply channel was increase.



Figure 13 An oorani in Rayavaram (photo by M.SINOU)

In Karaikudi, the channels along the streets were under maintenance. Municipality is cleaning them, increasing their depth to face the coming monsoon.



Figure 14 Maintening work of the channel in Karaikudi (photo by M.SINOU)

Still in this town, Karaikudi municipality has just set a draft of a new project concerning tank, to get some funds from the Tamil Nadu government. It will concern 14 water bodies for 7 crores.

They want to close with fences and greeneries their mains ooranis, put footpath and seat around the pond to be use as a green area in the city and not as water source. The water body will be use to fill the water table, they will be cleaned and deepen for this purpose. People will be require to use the public tap for their water needs.

The project should start January 2017.

At the scale of the state, some projects were proposed to increase the part of rain water harvesting in water use.

For exemple on every building permit, the owner will pay 2 500 roupies as tax on water. If he makes a rainwater reservoir on his roof, this amount will be returned to him according to the town planner of Devakottai.

C. Specific issues

As the management has passed from the community to publics departements, the community is no more involved and doesn't take in consideration the importance of maintening the water system.

As the tank dedicaced to irrigation, the tank in urban landscape has to face the same main issue : a lack of maintenance which weakens the water network as an accumulation of silt or crack in the bonds.

Some invasive species developed into the water and around the pond which could affect the natural life, the use of the pond or be harmfull for the users.



Figure 15 An oorani in Kothari (photo by C.BUGEIA)

The drainage network in laterite stone, is not maintained properly. Many inhabitants today reject their waste water in it, polluting the different water bodies which are still uses for fishing, bathing and drinking purposes. The waste water rejected in the rain harvesting water makes difficult the maintenance of the drainage.



Figure 16 A channel in Karaikudi (photo by M.SINOU)

A lack of restrictions concerning water bodies worsens the situation of ooranis and erys.

The development of new built area on catchment area disrupt the recuperation of water, a lot of tank have an insufficient water level, even during the monsoon time.

Also the drainage system is not maintain: we saw in Kanadukathan

- Street with unefficient drainage (debris, gravels or stagnating water in the drainage)
- Streets where the drainage network has disappeared covered by gravels (filled up with debris)
- Streets where the drainage has disappeared completely.



Figure 17 Channels in Pallathur (left) and Kothadi (right) (photo by M.SINOU)

A lack of knowledge about maintenance is also the cause a worsening of the situation. Some Chettiars don't use anymore their courtyard to collect water but pipes which go directly to the streets.

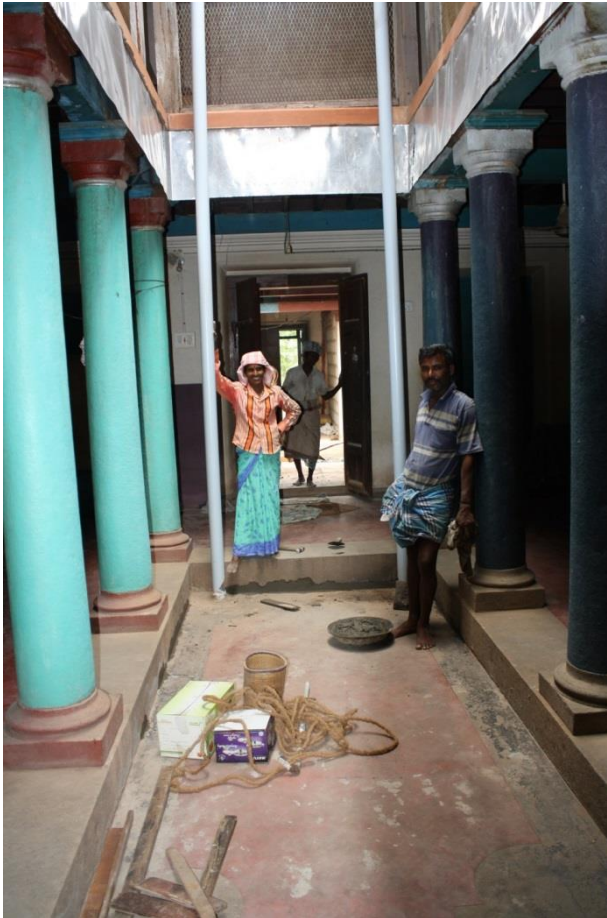


Figure 18 New Pipes for collecting water in a Chettiar house in Kothari (photo by M.SINOU)



Figure 19 House in Pallathur (photo by C.BUGEIA)

Because the drainage system and the water bodies work as a system, every weakness can endangered the whole system.

Groundwater and water bodies

Groundwater is the main irrigation source in India. Since Independence, the political incentives are developing irrigation, intensifying agricultural cycles and increasing irrigated surfaces.

Irrigation using ground water, through individual bores, offered many advantages, which explain the keen interest shown by farmers in this technique. The user is thus free of the many constraints of collective irrigation, and to some extent is no longer reliant on rainfall. In addition the right to extract ground water is linked to land ownership, with no limitation regarding the amount of water or the bore's depth, which gives the well owner total liberty to sell the water he extracts.

The technique also offers farmers the possibility of accessing irrigation on land that was previously rainfed. Lastly, heavily subsidised electricity for agricultural purposes and even free electricity in Tamil Nadu (this state being the first to introduce the measure in 1991) make this technique economically attractive and justify the political support behind this practice.

On the contrary tank irrigation presents various constraints : it is mostly dependent on rainfall for tank filling, so that there is constant uncertainty about the available amount of water and its period of availability, tank storage capacity may be limited, and further reduced by silt deposits and encroachment, infrastructures are seldom in good working order, which

complicates their management and reduce their storage capacity; since this involves a collective irrigation technique, access to water is dependent on field location, informal or formal distributions rules, and even on social power relation. To access water, a tank irrigator is thus dependent on others, especially if his fields are located in the downstream part of the irrigation area.

Tank irrigation therefore appears to take second place and even be the contrary of groundwater irrigation : collective versus expansion, state owned versus individual infrastructure, decline versus expansion, water sharing constraints versus unregulated use, traditional versus modern technique, a lack of interest by the state (except since the nineties) versus numerous incentives since the sixties, to name only the main features.

The phenomenon is also accurate for ooranis. People are building independently their own borewell to satisfy their personal water needs. The lack of concertation and regulation around this practice worsens the situation of the water table.

D. Recommendations

Creating a file which identifies each ery and ooranis would make easier the maintenance of the traditional water system in Chettinad. It should include physical details (deep, capacity, etc) and administration details (owner, maintenance team in charge) about each water pond. Similar documents already exist but some were not update since the end of the English colony.

It will also be useful to map the existing draining system from the Chettiars mansions to the water body through the channels. Adding the public taps and private boreholes will give an understanding of how water is managed in every village. It should include the state of conservation of the water infrastructure to help to plan better the maintenance work. (examples of Kanadukathan documents on next page)

For example ArcHe-S with the partnership of Région Centre Val de Loire have made a list of advices to restore the draining system in Kanadukathan, depending on the state of it in each street :

- Clean and dig the existant system (removing gravels etc)
- If the strucutre is still there : restore the drainage, trying to maintain the original strucutre with similar materials
- If the structure is lost, try to create a new drainage system similar to the traditional one

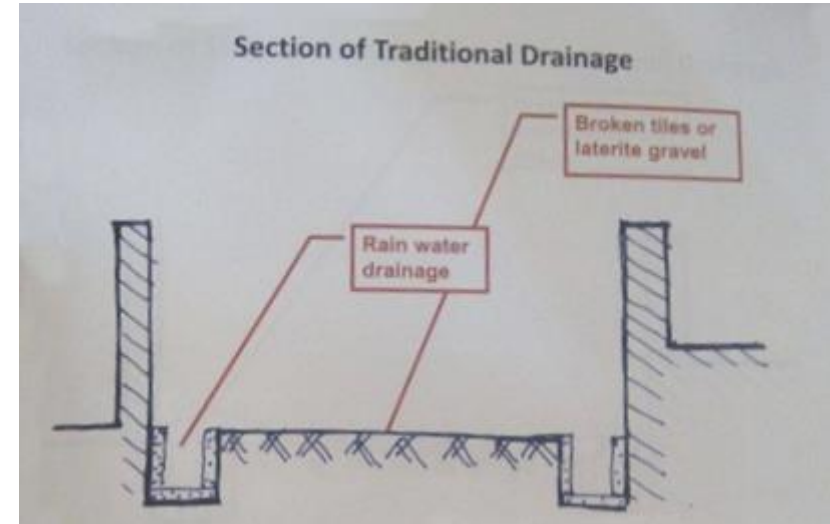


Figure 20 Section of Traditional Drainage (Revive Chettinad Heritage Campaign document)

Implement a specific waster water network with water treatment plant canl be a solution to keep clean the drainage system and the water in the pond.

It is important to maintain and improve this traditional system as rain water is the only natural and sustainable resource in the region for water consumption. Awareness program should be undertaken through governement offical, local authorities as well as inhabitants in order to preserve and modernize it for the future generation.

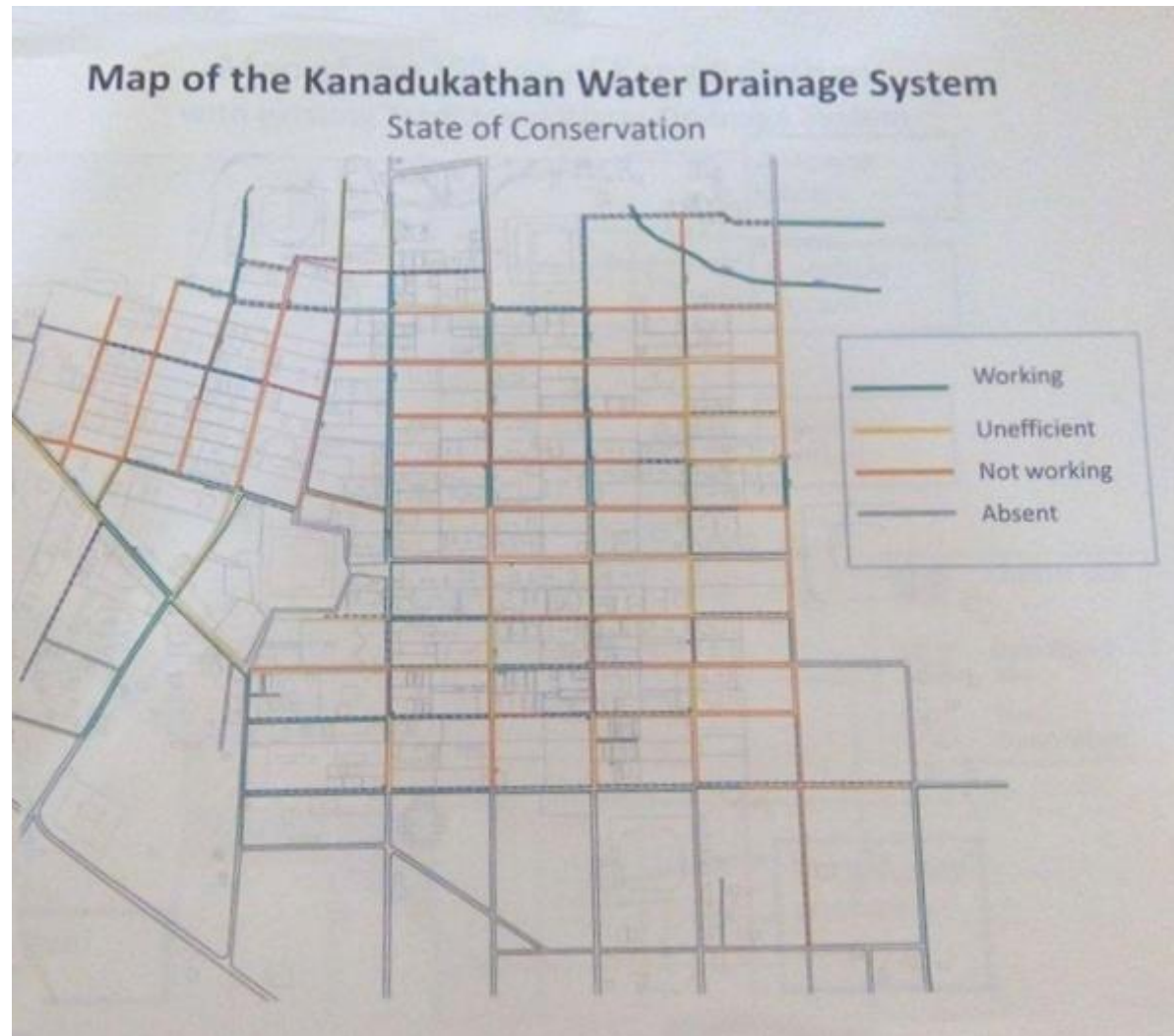


Figure 21 State of conservation of the drainage system in Kanadukathan (Revive Chettinad Heritage Campaign document)



❖ Conclusion

India is a fast growing economy, where the urban landscape is evolving even faster. Heritage buildings, except for some temples and administration buildings are poorly protected by laws or regulations. Chettinad is not yet affected by these urban modifications, allowing the area to keep its urban heritage in its almost original form.

Nowadays the area has to face a loss of economic attractiveness and some resource constraints, especially in water, which result in a loss of population and threatens the preservation of the Chettiar heritage.

Since 2006, there had been different protection projects on Chettinad Heritage. The two most memorable were : Revive Chettinad Heritage Campaign in 2008 which gathers a lot of national and international partner. It ended in 2010 but was the base of the second most memorable project : the inscription of Chettinad region on the UNESCO tentative list of India in 2014.

Even though, these projects were stopped due to disputes between the main actors, they allowed an international recognition of Chettinad heritage and moderated deterioration of Chettiars mansions.

A citizen involvement or the entrance of new partners could be a solution to start over the project of Chettinad application on the UNESCO World Heritage List.

Projects to enhance the status of Chettinad were only heritage protection project, but we should ask ourselves “Is Heritage protection a solution to keep alive this traditional region ?”

❖ Bibliographie

Academic works

ArcHe-S, Bernard Dragon & Michel Adment, Draft Action Plan for the Protection, Conservation and Development of the Chettinad Region, UNESCO

ArcHe-S, Bernard Dragon & Michel Adment, Sarita Vanranda, Saara Ansari, Abdul Rahman, Aby Philip, Marie Kindel, Atlas du Chettinad, 2009.

ArcHe-S, Bernard Dragon & Michel Adment, « Le Passeport du Patrimoine Indien, Itinéraire du Chettinad au Tamil Nadu ». UNESCO/ArcHe-S, 2012.

Marie Kindel, « La patrimonialisation en Inde : appropriation, protection, valorisation. L'exemple des palais du Chettinad au Tamil Nadu ». Mémoire de Master 1 Géopolitique, Université Paris 1 Panthéon-Sorbonne, 2010.

Revive Chettinad Heritage Campaign documents : <http://arche-s.org/04BiblioCampaign.html> accessed on september 2016

Rukkumani Ramakrishnan Harishankar, « Systèmes de gestion de l'eau traditionnels au Tamil Nadu et leur relation à l'aménagement du territoire », accessed on july 2016. URL : <http://citeres.univ-tours.fr/spip.php?article2048>

Articles

Bostanavaron François, « Les somptueux palais oubliés du Chettinad, Le Monde, octobre 2015 », accessed on may 2016.
URL : http://www.lemonde.fr/m-voyage-le-lieu/article/2015/10/09/inde-les-palais-oublies-du-chettinad_4786228_4497643.html

Duggleby Luke, « Putting the Houses in order », Geographical Magazine, october 2011 accessed on may 2016.

Joseph Marion, « Unesco : un processus d'inscription complexe », Le Figaro, août 2010, accessed on may 2016. URL : <http://www.lefigaro.fr/culture/2010/08/03/03004-20100803ARTFIG00492-unesco-un-processus-d-inscription-complexe.php>

Région Centre, « Lettre d'information », N°4, octobre 2010 ; N°1, 07/2008 ; N°2, 07/2009, N°3, avril 2010 .

Trebay Guy, "Houses of the Holy", New York Times, 17 November 2010, accessed on may 2016. URL : tmagazine.blogs.nytimes.com/2010/11/17/houses-of-the-holy/

Vaishna Roy "Noble Houses", Outlook Travellers 2011, accessed on may 2016. URL : <http://travel.outlookindia.com/article.aspx?277900>

"UNESCO plans to preserve Chettinad buildings", The Hindu, may 2007, accessed on may 2016. URL : <http://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/article1840197.ece>

Books

Aubriot Olivia (dir), « Le Gange miroir social » Edition La dispute, collection Tout autour de l'eau, 2012.

Aubriot Olivia (dir), « Tank and Well Irrigation Crisis Spatial, Environmental and Social Issues », CNRS, 2013.

Chopra Tarun, « La vache sacrée et autre histoire indienne » Prakash Book, 2008

Gaucher, "De la maison à la ville en pays tamoul ou la Diagonale interdite", Ecole française d'Extrême Orient, 2007

Jaffrelot Christophe, « Inde, l'envers de la puissance », CNRS 2012

Mukundan, " The ERY systems of South India", Akash Ganga Trust, 2005

S.Muthiah, M. Meiyappan, V. Ramasamy , "The Chettiar Heritage", Madras, 2000

Serge Santelli, (dir), Palais et demeures des villes indiennes, le patrimoine architectural oublié de Bhopal, Bénarès, Gwalior, Srirangam et Karaikudi, Ecole nationale supérieure d'architecture de Paris-Belleville, 2010.

TP Raghunath, S Pushpalatha, T Srikant “Field manual on community organisation for Tank rehabilitation project”, Published by : Centre for ecology and rural development 2003

Rudner, D, Caste and Capitalism in Colonial India, the Nattukottai Chettiars, Munshiram Manoharlal Publishers, 1994.

Museum/Workshop place

Athangudi tiles in Athangudi

Chettinadu mansion in Kanadukathan

Koviloor museum in Koviloor (next to Karaikudi)

Mahalakshmi Handloom in Kanadukathan

Talk/ Recording

Anne Bonneau, « Les instantanés du monde », URL : <http://instantsdumonde.blogspot.in/>

INTACH : “Talk on VILLAGES OF MANSIONS The Chettinad house as a repository of craft” by Ms. Visalakshi Ramaswamy on June 3rd, 2016 at Amethyst at 6.00 pm

Website

ArchHe-S : <http://arche-s.org/>

INTACH : <http://www.intach.org/>

Saratha Vilas : <http://www.sarathavilas.com/SarathaVilasFr/02sarathalocation.html>

The Bangala: <http://thebangala.com/culture.html>

UNESCO : <http://whc.unesco.org/fr/list/> and <http://whc.unesco.org/en/statesparties/in>

World Monument fond : <https://www.wmf.org/>

Video

Chettinadu mansion

Dakshinatra Museum <http://dakshinachitra.net/>

Muthucapital Ramn, "History of Nattukottai Nagarathar", accessed on june 2016. URL : https://www.youtube.com/watch?v=zNzlx_nJYvs

❖ Annexs

Chettinad, Village Clusters of the Tamil Merchants : Tentativ List File



Date de soumission : 15/04/2014

Critères: [\(ii\)\(v\)\(vi\)](#)

Catégorie : Culturel

Soumis par : Permanent Delegation of India to UNESCO

Etat, province ou région Sivagangai & Pudukottai Districts, Tamil Nadu State

Ref.: 5920

Le Secrétariat de l'UNESCO et le Centre du patrimoine mondial ne garantissent pas l'exactitude et la fiabilité des avis, opinions, déclarations et autres informations ou documentations fournis au Secrétariat de l'UNESCO et au Centre du patrimoine mondial par les Etats Parties à la Convention concernant la protection du patrimoine mondial, culturel et naturel.

La publication de tels avis, opinions, déclarations, informations ou documentations sur le site internet et/ou dans les documents de travail du Centre du patrimoine mondial n'implique nullement l'expression d'une quelconque opinion de la part du Secrétariat de l'UNESCO ou du Centre du patrimoine mondial concernant le statut juridique de tout pays, territoire, ville ou région, ou de leurs autorités, ou le tracé de leurs frontières.

Les noms des biens figurent dans la langue dans laquelle les Etats parties les ont soumis.

Description

The property comprises series of 3 clusters of total 11 villages.

Cluster I (4 settlements): Kanadukathan: N10° 10' 29,17''; E78° 46'41,64''; Pallathur : N10° 8' 42,61''; E78° 47' 58,21''; Kothamangalam: N10° 11' 32,58''; E78° 48' 24,49'' ; Kottaiyur: N10° 6' 42,78''; E78° 47' 44,91''.

Cluster II (4 settlements): Athangudi : N10° 9' 21,63''; E78° 43' 41,73''; Chokalingampudur: N10° 9' 0,93''; E78° 44' 48,91''; Karaikkudi : N10° 4' 2,32''; E78° 45' 55,59''; Kandanur: N10°6'20''E78°49'35''.

Cluster III (3 settlements): Rayavaram : N10° 14' 56,62''; E78° 48' 45,16'; Arimalam : N10° 15' 28,62''; E78° 53' 22,4''; Kadiapatti-Ramachandrapuram: N10° 14' 0,95''; E78° 47' 20,33''

Chettinad comprises of a network of 73 villages and 2 towns forming clusters spread over a territory of 1,550 km² in the Districts of Sivagangai and Pudukottai in the State of Tamil Nadu.

The Natukottai Chettiars belong to a lineage of wealthy traders and financiers who made their fortunes by extending their business to the whole of Southeast Asia, particularly during the second half of 19th and early 20th century when they were at the peak of their economic power. Vital component in the south Indian economy, the Natukottai Chettiars represented the major banking Hindu community of South India. Their vast influence and richness allowed the community to build a dense network of 96 villages among which 73 remain, according to the *Maniyadi Sastram* [\[1\]](#) texts, the traditional planning and lifecycle precincts.

All the Chettiar settlements possess outstanding physical characteristics of urban and land-use planning with their South-North/East-West grid pattern, including water system, and the development of palatial architecture which depict a unique cultural interchange of cultures with influences from all over the world and the combination of the vibrant Tamil traditions. These settlements and the architecture, built from 1850's to 1940's, are directly associated with the rich living heritage specific to the Chettiar community.

The proposed nomination is comprised of 3 series of villages forming clusters which contribute to the OUV as a whole with urban character forming a unique architectural ensemble. This set reflects a significant portion of the Chettinad territory. The first cluster comprises of 4

villages, Kanadukathan, Pallathur, Kottaiyur and Kothamangalam in the District of Sivagangai. These settlements are neighboring the Raja's Palace which is the starting point for a knowledge-based cultural itinerary in the region. Kottaiyur has been selected as its traditional settlement is exposed to urban development from its neighbor Karaikudi, the economic centre of the region.

The second series of cluster, South of the first series, covers the four Chettiar areas of Karaikudi, and the rural villages of Kandamur, Athangudi and Chokalingampudur, in the District of Sivagangai.

The third series of cluster is situated North of the first series in the District of Pudukottai with the very significant villages of Rayavaram, Kadiapatti and Arimalam.

[1] *Thiagarajan, Deborah. The vernacular architecture of Tamil Nadu.* Madras Craft Foundation, 1991

Justification de la Valeur Universelle Exceptionnelle

Chettinad possesses some outstanding physical characteristics of urban and rural planning which create a unique architectural ensemble with thousands of palatial houses. This ensemble reflects the way the Hindu Tamil community of Chettiars lived. As the result of their travels, they have integrated multiple influences into the Tamil traditions. This blend represents the uniqueness of Chettinad.

They had a vision of land-use planning which has connected the different urban to landscape elements, particularly for rainwater harvesting and storage system. The architectural features of the houses comprised of series of courtyards organized along a longitudinal axis as well as the use of material is taking into consideration the semi-arid and hot climate.

Chettinad architecture is also closely linked to the lifecycle rituals of the Chettiar community. The mansions were conceived to perform the different functions, rituals and family celebrations during the course of life from birth to death. In addition to the lifecycle rituals, the temple and village festivals are part of the Chettiar culture forming a large set of rituals all over the Tamil year.

Criterion (ii): Since the time the community settled in the area, the Chettiars have upheld a vision of planning and development of their territory comprised of outstanding components. Here traditional and overseas influences blend together creating a unique style expressed at the urban, architectural and decorative levels. While the town planning characteristics remain unchanged with the ensemble created by long series of houses, the plan and volumetric configuration and the typologies of the buildings evolved over decades, from 1850' to 1940'. Pavilions, halls and courtyards were added for business purposes and as areas for receptions and weddings, thus adding palatial features to the traditional houses. Every aspect of the architecture was conceived and made to display the wealth of the owner: from the huge development in plan, to the monumental facade, the height of which was enhanced by adding multiple levels of balustrades and the use of many architectural elements such as doubled colonnades and loggias.

In order to construct and decorate these mansions, materials and expertise were brought from all over the world, which added to the cultural glory of Chettinad. For examples, teak wood was imported from Burma, satin wood from Ceylon, marble from Italy and Belgium, cast iron and steel from UK and India, ceiling in metal plates from Great Britain, tiles from Bombay, Japan, Germany, France and England, chandeliers from Belgium, France and Italy. As they required the best, they also brought skills from different regions of India such as woodcarving, frescoes and egg-plastering.

The layout as well as the large scale and the number of these palatial houses (estimated from 10,000 to 15,000), are very unique in India

The Chettinad region comprises a great number of striking “Art Deco” style houses which were largely built during the 1930's and 1940's. Many villages have examples of this international architectural style.

Criterion (v): Due to the fact that they settled in a hot and semi arid region, the Chettiars took the climate into consideration to plan the villages, design the palatial houses and in choosing the materials to use. They had a vision of land-use planning which has shaped a unique landscape.

The villages are organized following north-south axes, along which are created the longitudinal east-west orientated plots. Following this configuration the houses are built around an east/west central courtyard which provides shade, light, coolness and air.

The materials used for construction also respond to the climatic requirements: thick walls of bricks, lime plasters, multiple layer of terracotta tiles roofing, marbles and stones floors are essential components.

The slopes of the roofs are important and allow the collecting of rain water during the monsoon season. The collected water serves for household use and to fill up the wells; the overabundant water flows into the drainage system of the village which feeds the common ponds and tanks.

The Chettiars have undertaken important earth-work in order to manage the rain water harvesting. They have developed and enhanced on a large scale over the territory, the traditional Tamil techniques of water management. They have shaped together with the local agrarian communities a specific landscape which is today a green and attractive area which hosts migrating bird species a part of the year after the monsoon, in the vicinity of the Gulf of Mannar. This landscape is made of an alternation of lakes lined by bunds planted with different species of trees, of agricultural lands, and of forests and ancient sacred groves.

This water system is comprised of two types of inter-connected networks. One is inside the villages comprising drainages and ponds (or *ooranis*). The other one is made of *erys* (or *Kanmois*), traditional surface water storage reservoirs, spread over the countryside around the villages.

Criterion (vi): Chettinad architectural uniqueness such as described in criteria (ii) and (v) is closely linked to the lifecycle rituals and living traditions of the Chettiar community. The mansions were conceived to perform the different functions, rituals and family celebrations during the course of life from birth to death. They have been planned by the master masons who built the temples, the *stapathis*, and followed the traditional Tamil space organization. Chettiar tangible and intangible heritage are inseparable.

The main courtyard is considered as the centre part of the house where the rituals are taking place. It operates as a temple sanctuary where the Chief priests of one of the 9 clan temples (each Chettiar belongs to one of the 9 clan temples), celebrate the events. Each space in the house was planned both for receiving daily functions and occasionally hosting rituals.

It is to be noted the importance of the cooking area in the Chettiar house where many cooks were hired at the occasion of the celebrations. This way the Chettiars have elaborated a sophisticated cuisine taking recipes from South India and from the countries where they have developed their business shaping a blend and creating an original stylish cuisine.

In addition to the lifecycle traditions, the temple and village festivals are part of the Chettiar culture forming a large set of rituals all over the Tamil year.

There is an important local craft industry which produces fine architectural and decorative elements such as tiles and wood carvings, ritual items such as bronze figures as well as gifts for weddings such as *sarees*, basket weavings and jewels.

Déclarations d'authenticité et/ou d'intégrité

Authenticity of Form and Design:

Despite the loss of a certain number of Chettiar houses, there are significant remains of traditional urban fabric as well as mansions to consider and to claim both authenticity and integrity. *Chettinad Trail in Tamil Nadu* [\[1\]](#), outlines the general mapping and inventory of the region.

The different studies realized by universities from India and Europe, attest the original character of the urban planning as well as the architectural features. The studies produced in the framework of the *Revive Chettinad Heritage Project* [\[2\]](#) have highlighted the evolution of the Chettiar settlement from 1850's to 1945. The study of Ms. Silvia Talevi [\[3\]](#), shows the common urban characters of the villages of Kanadukathan, Pallathur and Kothamangalam, such as the urban grid pattern, the orientation according to cardinal points, the main streets with North-South direction and the secondary streets with East-West direction.

The orthogonal plan of the villages is a blend of Western and Tamil organization. The layout of the house is a common feature in all the villages (*Evolution* [\[4\]](#)). 50 House Inventory forms have been realized in 3 villages which attest the original character.

The spaces and their use have survived over the evolution, from the 1860's houses to the late Art Deco, (*Transition from Tradition: A case of Art-Deco Chettiar Bungalows in Tamil Nadu 1930 - 1940* [\[5\]](#)).

In another study, Caroline Horgnies [\[6\]](#), attests clearly the origins and dates of the material as well as the blend of culture with the architectural features of Western influences and of traditional Dravidian references given by the *Stapathis*.

Authenticity of Materials and Substance: An important collection of materials have been inventoried and is reflecting their diversity, their various origins from India and abroad and their dates of making (1860' to 1940').

*Authenticity of use and Function:*One of the major inventory work on Chettiar traditions has been realized by a group of Chettiars who published *The Chettiar Heritage*[\[7\]](#). They have inventoried all the different rituals of the lifecycle, which are today followed by the community in the ancestors' homes, preserving both built and living heritage.

Ms. Rani Vedamuthu[\[8\]](#) has described the traditional functions in the Chettiar house showing the undivided joint family way of living.

*Authenticity of Traditions, Techniques and Management Systems:*The Chettiar homes have been constructed following the traditional rules of space organization by the master masons who built the Dravidian temples of the region, the *stapathis*, *Traditional and Vernacular Architecture*[\[9\]](#).

The Ery Systems of South India, Traditional Water Harwesting[\[10\]](#) is stating how the system of network of lakes is organized in Tamil Nadu and how agrarian communities manage the water system. Recent inventory works show the importance of the traditional rain water harvesting system in the Chettiar villages. Unfortunately this system has not been maintained to ensure properly the collect of rainwater.

*Authenticity of Location and Setting:*Revenue maps are the official graphic documents inherited from the British rulers and are still used as reference for mapping the villages. By superimposition with satellite views it was stated that the urban fabric remains in its integrity. (*Atlas of Chettinad*[\[11\]](#))

*Authenticity of Language, and other forms of Intangible Heritage:**The Origin of Nattukottaiyarss and their Communal Practices*[\[12\]](#) is an original Tamil document on palm leaves, dated about 1840', stating the Chettiar traditions with detailed description of the different rituals of wedding.

*Authenticity of Spirit and Feeling:*Chettinad is a cultural territory organized in 9 clan temples. These temples are living places where each member of the community is attending for celebrating the different hallmarks of his lifecycle.

*Other internal and external factors of Authenticity:*The Chettiars have extended their activities and settled their business over South East Asia, in particular in Burma, Vietnam, Malaysia, Singapore, Indonesia and Ceylon where they have built temples. They have got the permission of building sanctuaries for their devotions. These temples are still standing today. (The photographs inventory of Mr. C.Y. Ravi).

Integrity

The recent surveys of some villages of the region show that many of the mansions have already disappeared. However this network of 73 villages and 2 towns still comprised of large number of palatial architecture, more than 10 000. The urban grid pattern still remains authentic, as no main alterations have been undertaken in the settlements, preserving the integrity of the town planning. The traditional water management system remains but important portions need to be restored and modernized. According to the preliminary inventory studies, the state of conservation of the palatial houses varies from one village to another. Most of the houses remains intact with the main architectural features. The houses still showcase the lifestyle of the Chettiar community. Despite the loss of about 19% of the buildings, there is still in an important number them in a surviving traditional urban form to claim integrity.

The Chettiar living traditions are still alive which has probably enabled the preservation of many of the Chettinad buildings.

The landscape shaped over centuries was largely preserved. Some agricultural communities are carrying out their activities and maintain the landscape features and botanical species in the region even if the young generations are more and more moving to the metropolis abandoning their native rural places for attractive job opportunities.

Among other living heritage, the unique Ayyanar rituals of the region and their shrines are located in sacred groves which preserve the botanical and fauna species of Tamil Nadu.,

[1] *Indian Heritage Passport Programme, Chettinad Trail in Tamil Nadu*, Bernard Dragon, Michel Adment, UNESCO 2010

[2] *Draft Action Plan on Protection Conservation & Development of the Chettinad Region*, prepared by ArcHe-S for UNESCO, 2007

[3] *Chettinad Heritage Trail*, Silvia Talevi, RLICC /ArcHe-S 2012

[4] *The Evolution, Chettinad Heritage Trail*, Silvia Talevi, RLICC/ArcHe-S 2012

[5] *Transition from Tradition: A case of Art-Deco Chettiar Bungalows in Tamil Nadu 1930 – 1940*, by Shivang Shelat, CEPT-AhmanabadArcHe-S

- [6] *Interiors of Chettiars Houses*, Master Thesis, Caroline Horgnies, RLICC in partnership with ArcHe-S
- [7] *The Chettiar Heritage*, Meenakshi Meyyappan, Visalakshi Ramasamy, S. Muthia, 2010,
- [8] Ms. Rani Vedamuthu[8], Dean SPA Anna University *An Approach- Arch Approach to the Study of the Contemporay Chettiar Dwelling of Tamil Nadu, India*
- [9] *The Traditional and Vernacular Architecture*, Deborah Thiagaraj, Madras Craft Foundation 1991
- [10] *The Ery Systems of South India, Traditional Water Harvesting*, T.M. Mukudan, Akash Ganga Trust 2005
- [11] *The Atlas of Chettinad*, ArcHe-s/ UNESCO/ Region Centre/ Tamil Nadu, 2009
- [12] *The Origin of Nattukottaiyars and their Communal Practices*, M. Gobalakichenane East West Books 2008

Comparaison avec d'autres biens similaires

COMPARABLE SITES ON THE WH LIST

Kaiping Diaolou and Villages - China

The Diaolou represent in dramatic physical terms an important interchange of human values - architectural styles brought back from North America by returning Chinese and fused with local rural traditions - within a particular cultural area of the world.

Decorated Farmhouses of Hälsingland- Sweden

Seven timber houses reflect the prosperity of independent farmers who used their wealth in the 19th century to build substantial new homes with elaborately decorated ancillary houses or suites of rooms reserved for festivities.

Ancient Villages in Southern Anhui – Xidi and Hongcun - China

The two traditional villages of Xidi and Hongcun preserve to a remarkable extent the appearance of non-urban settlements of a type that largely disappeared or was transformed during the last century. Their street plan, their architecture and decoration, and the integration of houses with comprehensive water systems are unique surviving examples.

COMPARABLE SITES ON THE TENTATIVE LISTS

The Victorian & Art Deco Ensemble of Mumbai

By 1850's Bombay became a fusion of varied cultures and opened her lands to truly develop as the "Gateway of India" bringing together industrial growth, international architectural styles and nurturing different ideologies to develop in an analogous fashion. The Chettinad region is rich of Victorian and Art Deco ensemble and is participating to development of international architectural styles in India.

Historic city of Ahmadabad

Ahmadabad city, reputed as 'Manchester' of India, is a busy industrial city situated in cotton-growing hinterland north of Gulf of Cambay. The house form, the grouping of houses and the hierarchy of its access ways formed an extremely secure and homogeneous settlement pattern, which even today provides an excellent example of community living and urbanity based on cultural identity and sense of collective agreement in its formation. The main similarity consists in the community living and urbanity based on cultural identity.

Shanxi Businessmen's Courtyard Houses - China

Shanxi Businessmen's Courtyard Houses located in Jinzhong city, Shanxi province are regarded as outstanding examples of civilian residence building (such as the Chettiar homes), when Chinese merchant capital grew rapidly during the Ching dynasty.

OTHER COMPARABLE SITES IN INDIA

Rural Settlements of Merchant community of Shekhawati in Rajasthan – India

The unique and diverse heritage of Shekhawati is comprised of beautiful havelis (mansions), grand temples, magnificent chattris (cenotaph), palaces, forts, wells, step wells and water tanks strewn all over in several towns and villages located in semi desert terrain bestowed with unique flora and fauna and a vibrant living tradition of folk, dances, music, cuisine, costumes, fairs and festivals. All these elements make Shekhawati a unique cultural landscape.

**This Format must be used for all nominations
submitted after 2 February 2005**

- The Nomination Format is available at the following Web address:
<http://whc.unesco.org/en/nominationform>
- Further guidance on the preparation of nominations can be found in Section III of the *Operational Guidelines*
- The original signed version of the completed Nomination Format should be sent in English or French to
UNESCO World Heritage Centre
7, place de Fontenoy
75352 Paris 07 SP
France
Telephone: +33 (0) 1 4568 1571
Fax: +33 (0) 1 4568 5570
E-mail: wh-nominations@unesco.org

Executive Summary

This information, to be provided by the State Party, will be updated by the Secretariat following the decision by the World Heritage Committee. It will then be returned to the State Party confirming the basis on which the property is inscribed on the World Heritage List.

State Party	
State, Province or Region	
Name of Property	
Geographical coordinates to the nearest second	
Textual description of the boundary(ies) of the nominated property	
A4 or A3 size map(s) of the nominated property, showing boundaries and buffer zone (if present)	Attach A4 or A3 size map(s) which should be the reduced size version of the original copies of topographic or cadastral maps showing the nominated property and buffer zone (if present) at the largest scale available included or annexed to the nomination.
Criteria under which property is nominated (itemize criteria) (see Paragraph 77 of the <i>Operational Guidelines</i>)	

<p>Draft Statement of Outstanding Universal Value (text should clarify what is considered to be the Outstanding Universal Value embodied by the nominated property, approximately 1-2 page format)</p>	<p>According to the paragraph 155, the Statement of Outstanding Universal Value should be composed of:</p> <ul style="list-style-type: none"> a) Brief synthesis b) Justification for Criteria c) Statement of Integrity (for all properties) d) Statement of authenticity for properties nominated under criteria (i) to (vi) e) Requirements for protection and management <p>See format in Annex 10</p>
<p>Name and contact information of official local institution/agency</p>	<p>Organization: Address: Tel: Fax: E-mail: Web address:</p>

Properties for inscription on the World Heritage List

Note: In preparing the nomination, States Parties should use this format but delete the explanatory notes.

NOMINATION FORMAT	EXPLANATORY NOTES
1. Identification of the Property	Together with Section 2, this is the most important section in the nomination. It must make clear to the Committee precisely where the property is located and how it is geographically defined. In the case of serial nominations, insert a table that shows the name of the component part, region (if different for different components), coordinates, area and buffer zone. Other fields could also be added (page reference or map number, etc.) that differentiate the several components.
1.a Country (and State Party if different)	
1.b State, Province or Region	
1.c Name of Property	<p>This is the official name of the property that will appear in published material about World Heritage. It should be concise. Do not exceed 200 characters, including spaces and punctuation.</p> <p>In the case of serial nominations (see Paragraphs 137 -139 of the <i>Operational Guidelines</i>), give a name for the ensemble (e.g., <i>Baroque Churches of the Philippines</i>). Do not include the name of the components of a serial nomination, which should be included in a table as part of 1.d and 1.f.</p>
1.d Geographical coordinates to the nearest second	In this space provide the latitude and longitude coordinates (to the nearest second) or UTM coordinates (to the nearest 10 metres) of a point at the approximate centre of the nominated

NOMINATION FORMAT	EXPLANATORY NOTES
	<p>property. Do not use other coordinate systems. If in doubt, please consult the Secretariat.</p> <p>In the case of serial nominations, provide a table showing the name of each component part, its region (or nearest town as appropriate), and the coordinates of its centre point.</p> <p>Coordinate format examples:</p> <p>N 45° 06' 05" W 15° 37' 56" or</p> <p>UTM Zone 18 Easting: ⁵45670</p> <p> Northing: ⁴⁵86750</p>

Id n°	Name of the component part	Region(s) / District(s)	Coordinates of the Central Point	Area of Nominated component of the Property (ha)	Area of the Buffer Zone (ha)	Map N°
001						
002						
003						
004						
Etc.						
Total area (in hectares)				ha	ha	

NOMINATION FORMAT	EXPLANATORY NOTES
<p>1.e Maps and plans, showing the boundaries of the nominated property and buffer zone</p>	<p>Annex to the nomination, and list below with scales and dates:</p> <p>(i) Original copies of topographic maps showing the property nominated, at the largest scale available which shows the entire property. The boundaries of the nominated property and buffer zone should be clearly marked. The boundaries of zones of special legal protection from which the property benefits should be recorded on maps to be included under the protection and management section of the nomination text. Multiple maps may be necessary for serial nominations (see table in 1.d). The maps provided should be at the largest available and practical scale to allow the identification of topographic elements such as neighbouring settlements, buildings and routes in order to allow the clear assessment of the impact of any proposed development within, adjacent to, or on the boundary line. The choice of the adequate scale is essential to clearly show the boundaries of the proposed site and shall be in relation to the category of site that is proposed for inscription: cultural sites would require cadastral maps, while natural sites or cultural landscapes would require topographic maps (normally 1:25 000 to 1:50 000 scale).</p> <p>Utmost care is needed with the width of boundary lines on maps, as thick boundary lines may make the actual boundary of the property ambiguous.</p> <p>Maps may be obtained from the addresses shown at the following Web address http://whc.unesco.org/en/mapagencies.</p> <p>All maps should be capable of being geo-referenced, with a minimum of three points on opposite sides of the maps with complete sets of coordinates. The maps, untrimmed, should show scale, orientation, projection, datum, property name and date. If possible, maps should be sent rolled and not folded.</p> <p>Geographic Information in digital form is encouraged if possible, suitable for incorporation into a GIS (Geographic Information System), however, this may not substitute the submission of printed maps. In this case the delineation of the boundaries (nominated property and buffer zone) should be presented in vector form, prepared at the largest scale possible. The State Party is invited to contact the Secretariat for further information concerning this option.</p> <p>(ii) A Location Map showing the location of the property within the State Party,</p> <p>(iii) Plans and specially prepared maps of the property showing individual features are helpful and may also be annexed.</p> <p>To facilitate copying and presentation to the Advisory Bodies and the World Heritage Committee A4 (or “letter”) size reduction and a digital image file of the principal maps should also be included in the nomination text if possible.</p> <p>Where no buffer zone is proposed, the nomination must include a statement as to why a buffer zone is not required for the</p>

NOMINATION FORMAT	EXPLANATORY NOTES
	proper protection of the nominated property.
<p>1.f Area of nominated property (ha.) and proposed buffer zone (ha.)</p> <p>Area of nominated property: _____ ha</p> <p>Buffer zone _____ ha</p> <p>Total _____ ha</p>	<p>In the case of serial nominations (see Paragraphs 137-140 of the <i>Operational Guidelines</i>), insert a table that shows the name of the component part, region (if different for different components), coordinates, area and buffer zone.</p> <p>The serial nomination table should also be used to show the size of the separate nominated areas and of the buffer zone(s).</p>
<p>2. Description</p>	
<p>2.a Description of Property</p>	<p>This section should begin with a description of the nominated property at the date of nomination. It should refer to all the significant features of the property.</p> <p>In the case of a cultural property this section will include a description of whatever elements make the property culturally significant. It could include a description of any building or buildings and their architectural style, date of construction, materials, etc. This section should also describe important aspects of the setting such as gardens, parks etc. For a rock art site, for example, the description should refer to the rock art as well as the surrounding landscapes. In the case of an historic town or district, it is not necessary to describe each individual building, but important public buildings should be described individually and an account should be given of the planning or layout of the area, its street pattern and so on.</p> <p>In the case of a natural property the account should deal with important physical attributes, geology, habitats, species and population size, and other significant ecological features and processes. Species lists should be provided where practicable, and the presence of threatened or endemic taxa should be highlighted. The extent and methods of exploitation of natural resources should be described.</p> <p>In the case of cultural landscapes, it will be necessary to produce a description under all the matters mentioned above. Special attention should be paid to the interaction of people and nature.</p>

NOMINATION FORMAT	EXPLANATORY NOTES
	<p>The entire nominated property identified in section 1 (Identification of the Property) should be described. In the case of serial nominations (see Paragraphs 137-140 of the <i>Operational Guidelines</i>), each of the component parts should be separately described.</p>
<p>2.b History and Development</p>	<p>Describe how the property has reached its present form and condition and the significant changes that it has undergone, including recent conservation history.</p> <p>This should include some account of construction phases in the case of monuments, sites, buildings or groups of buildings. Where there have been major changes, demolitions or rebuilding since completion they should also be described.</p> <p>In the case of a natural property, the account should cover significant events in history or pre-history that have affected the evolution of the property and give an account of its interaction with humankind. This will include changes in the use of the property and its natural resources for hunting, fishing or agriculture, or changes brought about by climatic change, floods, earthquake or other natural causes.</p> <p>Such information will also be required in the case of cultural landscapes, where all aspects of the history of human activity in the area needs to be covered.</p>
<p>3. Justification for Inscription¹</p>	<p>The justification should be set out under the following sections.</p> <p>This section must make clear why the property is considered to be of “Outstanding Universal Value”.</p> <p>The whole of this section of the nomination should be written with careful reference to the requirements of the <i>Operational Guidelines</i>. It should not include detailed descriptive material about the property or its management, which are addressed in other sections, but should convey the key aspects that are relevant to the definition of the Outstanding Universal Value of the property.</p>
<p>3.1.a Brief synthesis</p>	<p>The brief synthesis should comprise (i) a summary of factual information and (ii) a summary of qualities. The summary of factual information sets out the geographical and historical context and the main features. The summary of qualities should present to decision-makers and the general public the potential Outstanding Universal Value that needs to be</p>

¹ See also paragraphs 132 and 133.

NOMINATION FORMAT	EXPLANATORY NOTES
	<p>sustained, and should also include a summary of the attributes that convey its potential Outstanding Universal Value, and need to be protected, managed and monitored. The summary should relate to all stated criteria in order to justify the nomination. The brief synthesis thus encapsulates the whole rationale for the nomination and proposed inscription.</p>
<p>3.1.b Criteria under which inscription is proposed (and justification for inscription under these criteria)</p>	<p>See Paragraph 77 of the <i>Operational Guidelines</i>.</p> <p>Provide a separate justification for each criterion cited.</p> <p>State briefly how the property meets those criteria under which it has been nominated (where necessary, make reference to the "description" and "comparative analysis" sections of the nomination, but do not duplicate the text of these sections) and describe for each criterion the relevant attributes.</p>
<p>3.1. c Statement of Integrity</p>	<p>The statement of integrity should demonstrate that the property fulfils the conditions of integrity set out in Section II.D of the <i>Operational Guidelines</i>, which describe these conditions in greater detail.</p> <p>The <i>Operational Guidelines</i> set out the need to assess the extent to which the property:</p> <ul style="list-style-type: none"> • includes all elements necessary to express its Outstanding Universal Value; • is of adequate size to ensure the complete representation of the features and processes which convey the property's significance; • suffers from adverse effects of development and/or neglect (Paragraph 88). <p>The <i>Operational Guidelines</i> provide specific guidance in relation to the various World Heritage criteria, which is important to understand (Paragraphs 89–95).</p>
<p>3.1.d Statement of Authenticity (for nominations made under criteria (i) to (vi))</p>	<p>The statement of authenticity should demonstrate that the property fulfils the conditions of authenticity set out in Section II.D of the <i>Operational Guidelines</i>, which describe these conditions in greater detail.</p> <p>This section should summarise information that may be included in more detail in section 4 of the nomination (and possibly in other sections), and should not reproduce the level of detail included in those sections.</p> <p>Authenticity only applies to cultural properties and to the cultural aspects of 'mixed' properties.</p> <p>The <i>Operational Guidelines</i> state that 'properties may be understood to meet the conditions of authenticity if their cultural values (as recognized in the nomination criteria proposed) are truthfully and credibly expressed through a</p>

NOMINATION FORMAT	EXPLANATORY NOTES
	<p>variety of attributes’ (Paragraph 82).</p> <p>The <i>Operational Guidelines</i> suggest that the following types of attributes might be considered as conveying or expressing Outstanding Universal Value:</p> <ul style="list-style-type: none"> • form and design; • materials and substance; • use and function; • traditions, techniques and management systems; • location and setting; • language and other forms of intangible heritage; • spirit and feeling; and • other internal/external factors.
<p>3.1.e Protection and management requirements</p>	<p>This section should set out how the requirements for protection and management will be met, in order to ensure that the Outstanding Universal Value of the property is maintained over time. It should include both details of an overall framework for protection and management, and the identification of specific long term expectations for the protection of the property.</p> <p>This section should summarise information that may be included in more detail in section 5 of the nomination document (and also potentially in sections 4 and 6), and should not reproduce the level of detail included in those sections.</p> <p>The text in this section should first outline the framework for protection and management. This should include the necessary protection mechanisms, management systems and/or management plans (whether currently in place or in need of establishment) that will protect and conserve the attributes that carry Outstanding Universal Value, and address the threats to and vulnerabilities of the property. These could include the presence of strong and effective legal protection, a clearly documented management system, including relationships with key stakeholders or user groups, adequate staff and financial resources, key requirements for presentation (where relevant), and effective and responsive monitoring.</p> <p>Secondly this section needs to acknowledge any long-term challenges for the protection and management of the property and state how addressing these will be a long-term strategy. It will be relevant to refer to the most significant threats to the property, and to vulnerabilities and negative changes in authenticity and/or integrity that have been</p>

NOMINATION FORMAT	EXPLANATORY NOTES
	<p>highlighted, and to set out how protection and management will address these vulnerabilities and threats and mitigate any adverse changes.</p> <p>As an official statement, recognised by the World Heritage Committee, this section of the Statement of Outstanding Universal Value should convey the most important commitments that the State Party is making for the long-term protection and management of the property.</p>
<p>3.2 Comparative Analysis</p>	<p>The property should be compared to similar properties, whether on the World Heritage List or not. The comparison should outline the similarities the nominated property has with other properties and the reasons that make the nominated property stand out. The comparative analysis should aim to explain the importance of the nominated property both in its national and international context (see Paragraph 132).</p> <p>The purpose of the comparative analysis is to show that there is room on the List using existing thematic studies and, in the case of serial properties, the justification for the selection of the component parts.</p>
<p>3.3 Proposed Statement of Outstanding Universal Value</p>	<p>A Statement of Outstanding Universal Value is the official statement adopted by the World Heritage Committee at the time of inscription of a property on the World Heritage List. When the World Heritage Committee agrees to inscribe a property on the World Heritage List, it also agrees on a Statement of Outstanding Universal Value that encapsulates why the property is considered to be of Outstanding Universal Value, how it satisfies the relevant criteria, the conditions of integrity and (for cultural properties) authenticity, and how it meets the requirements for protection and management in order to sustain Outstanding Universal Value in the long-term.</p> <p>Statements of Outstanding Universal Value should be concise and are set out in a standard format. They should help to raise awareness regarding the value of the property, guide the assessment of its state of conservation and inform protection and management. Once adopted by the Committee, the Statement of Outstanding Universal Value is displayed at the property and on the UNESCO World Heritage Centre's website.</p> <p>The main sections of a Statement of Outstanding Universal Value are the following:</p> <ul style="list-style-type: none"> a) Brief synthesis b) Justification for Criteria c) Statement of Integrity (for all properties) d) Statement of authenticity for properties nominated under criteria (i) to (vi) e) Requirements for protection and management

NOMINATION FORMAT	EXPLANATORY NOTES
4. State of Conservation and factors affecting the Property	
4.a Present state of conservation	<p>The information presented in this section constitutes the base-line data necessary to monitor the state of conservation of the nominated property in the future. Information should be provided in this section on the physical condition of the property, any threats to the Outstanding Universal Value of the property and conservation measures at the property (see Paragraph 132).</p> <p>For example, in a historic town or area, buildings, monuments or other structures needing major or minor repair works, should be indicated as well as the scale and duration of any recent or forthcoming major repair projects.</p> <p>In the case of a natural property, data on species trends or the integrity of eco-systems should be provided. This is important because the nomination will be used in future years for purposes of comparison to trace changes in the condition of the property.</p> <p>For the indicators and statistical benchmarks used to monitor the state of conservation of the property see section 6 below.</p>
4.b Factors affecting the property	<p>This section should provide information on all the factors which are likely to affect or threaten the Outstanding Universal Value of a property. It should also describe any difficulties that may be encountered in addressing such problems. Not all the factors suggested in this section are appropriate for all properties. They are indicative and are intended to assist the State Party to identify the factors that are relevant to each specific property.</p>
(i) Development Pressures (e.g., encroachment, adaptation, agriculture, mining)	<p>Itemize types of development pressures affecting the property, e.g., pressure for demolition, rebuilding or new construction; the adaptation of existing buildings for new uses which would harm their authenticity or integrity; habitat modification or destruction following encroaching agriculture, forestry or grazing, or through poorly managed tourism or other uses; inappropriate or unsustainable natural resource exploitation; damage caused by mining; the introduction of exotic species likely to disrupt natural ecological processes, creating new centres of population on or near properties so as to harm them or their settings.</p>
(ii) Environmental pressures (e.g., pollution, climate	<p>List and summarize major sources of environmental deterioration affecting building fabric, flora and fauna.</p>

NOMINATION FORMAT	EXPLANATORY NOTES
change, desertification)	
(iii) Natural disasters and risk preparedness (earthquakes, floods, fires, etc.)	Itemize those disasters which present a foreseeable threat to the property and what steps have been taken to draw up contingency plans for dealing with them, whether by physical protection measures or staff training.
(iv) Responsible visitation at World Heritage sites	<p>Provide the status of visitation to the property (notably available baseline data; patterns of use, including concentrations of activity in parts of the property; and activities planned in the future).</p> <p>Describe projected levels of visitation due to inscription or other factors.</p> <p>Define the carrying-capacity of the property and how its management could be enhanced to meet the current or expected visitor numbers and related development pressure without adverse effects.</p> <p>Consider possible forms of deterioration of the property due to visitor pressure and behaviour including those affecting its intangible attributes.</p>

NOMINATION FORMAT	EXPLANATORY NOTES
<p>(v) Number of inhabitants within the property and the buffer zone</p> <p>Estimated population located within:</p> <p>Area of nominated property _____</p> <p>Buffer zone _____</p> <p>Total _____</p> <p>Year _____</p>	<p>Give the best available statistics or estimate of the number of inhabitants living within the nominated property and any buffer zone. Indicate the year this estimate or count was made.</p>
<p>5. Protection and Management of the Property</p>	<p>This section of the nomination is intended to provide a clear picture of the legislative, regulatory, contractual, planning, institutional and/ or traditional measures (see Paragraph 132 of the <i>Operational Guidelines</i>) and the management plan or other management system (Paragraphs 108 to 118 of the <i>Operational Guidelines</i>) that is in place to protect and manage the property as required by the <i>World Heritage Convention</i>. It should deal with policy aspects, legal status and protective measures and with the practicalities of day-to-day administration and management.</p>
<p>5.a Ownership</p>	<p>Indicate the major categories of land ownership (including State, Provincial, private, community, traditional, customary and non-governmental ownership, etc.).</p>
<p>5.b Protective designation</p>	<p>List the relevant legal, regulatory, contractual, planning, institutional and/ or traditional status of the property: For example, national or provincial park; historic monument, protected area under national law or custom; or other designation.</p> <p>Provide the year of designation and the legislative act(s) under which the status is provided.</p> <p>If the document cannot be provided in English or French, an English or French executive summary should be provided</p>

NOMINATION FORMAT	EXPLANATORY NOTES
	highlighting the key provisions.
5.c Means of implementing protective measures.	Describe how the protection afforded by its legal, regulatory, contractual, planning, institutional and/ or traditional status indicated in section 5.b. actually works.
5.d Existing plans related to municipality and region in which the proposed property is located (e.g., regional or local plan, conservation plan, tourism development plan)	<p>List the agreed plans which have been adopted with the date and agency responsible for preparation. The relevant provisions should be summarized in this section. A copy of the plan should be included as an attached document as indicated in section 7.b.</p> <p>If the plans exist only in a language other than English or French, an English or French executive summary should be provided highlighting the key provisions.</p>
5.e Property management plan or other management system	<p>As noted in Paragraphs 132 of the <i>Operational Guidelines</i>, an appropriate management plan or other management system is essential and shall be provided in the nomination. Assurances of the effective implementation of the management plan or other management system are also expected. Sustainable development principles should be integrated into the management system.</p> <p>A copy of the management plan or documentation of the management system shall be annexed to the nomination, in English or French as indicated in section 7.b.</p> <p>If the management plan exists only in a language other than English or French, an English or French detailed description of its provisions shall be annexed. Give the title, date and author of management plans annexed to this nomination.</p> <p>A detailed analysis or explanation of the management plan or a documented management system shall be provided.</p> <p>A timetable for the implementation of the management plan is recommended.</p>
5.f Sources and levels of finance	Show the sources and level of funding which are available to the property on an annual basis. An estimate could also be given of the adequacy or otherwise of resources available, in particular identifying any gaps or deficiencies or any areas where assistance may be required.
5.g Sources of expertise and	Indicate the expertise and training which are available from national authorities or other organizations to the property.

NOMINATION FORMAT	EXPLANATORY NOTES
training in conservation and management techniques	
5.h Visitor facilities and infrastructure	<p>The section should describe the inclusive facilities available on site for visitors and demonstrate that they are appropriate in relation to the protection and management requirements of the property. It should set out how the facilities and services will provide effective and inclusive presentation of the property to meet the needs of visitors, including in relation to the provision of safe and appropriate access to the property. The section should consider visitor facilities that may include interpretation/explanation (signage, trails, notices or publications, guides); museum/exhibition devoted to the property, visitor or interpretation centre; and/or potential use of digital technologies and services (overnight accommodation; restaurant; car parking; lavatories; search and rescue; etc.)</p>
5.i Policies and programmes related to the presentation and promotion of the property	<p>This section refers to Articles 4 and 5 of the <i>Convention</i> regarding the presentation and transmission to future generations of the cultural and natural heritage. States Parties are encouraged to provide information on the policies and programmes for the presentation and promotion of the nominated property.</p>
5.j Staffing levels and expertise (professional, technical, maintenance)	<p>Indicate the skills and qualifications available needed for the good management of the property, including in relation to visitation and future training needs.</p>
6. Monitoring	<p>This section of the nomination is intended to provide the evidence for the state of conservation of the property which can be reviewed and reported on regularly so as to give an indication of trends over time.</p>
6.a Key indicators for measuring state of conservation	<p>List in table form those key indicators that have been chosen as the measure of the state of conservation of the whole property (see section 4.a above). Indicate the periodicity of the review of these indicators and the location where the records are kept. They could be representative of an important aspect of the property and relate as closely as possible to the Statement of Outstanding Universal Value (see section 2.b above). Where possible they could be expressed numerically and where this is not possible they could be of a kind which can be repeated, for example by taking a photograph from the same point. Examples of good indicators are the:</p>

NOMINATION FORMAT	EXPLANATORY NOTES
	<p>(i) number of species, or population of a keystone species on a natural property;</p> <p>(ii) percentage of buildings requiring major repair in a historic town or district;</p> <p>(iii) number of years estimated to elapse before a major conservation programme is likely to be completed;</p> <p>(iv) stability or degree of movement in a particular building or element of a building;</p> <p>(v) rate at which encroachment of any kind on a property has increased or diminished.</p>

Indicator	Periodicity	Location of Records
NOMINATION FORMAT		EXPLANATORY NOTES
6.b Administrative arrangements for monitoring property		Give the name and contact information of the agency(ies) responsible for the monitoring referenced in 6.a.
6.c Results of previous reporting exercises		List, with a brief summary, earlier reports on the state of conservation of the property and provide extracts and references to published sources (for example, reports submitted in compliance with international agreements and programmes, e.g., Ramsar, MAB).
7. Documentation		This section of the nomination is the check-list of the documentation which shall be provided to make up a complete nomination.

<p>7.a Photographs and audiovisual image inventory and authorization form</p>	<p>States Parties shall provide a sufficient number of recent images (prints, slides and, where possible, electronic formats, videos and aerial photographs) to give a good general picture of the property.</p> <p>Slides shall be in 35mm format and electronic images in jpg format at a minimum of 300 dpi (dots per inch) resolution. If film material is provided, Beta SP format is recommended for quality assurances.</p> <p>This material shall be accompanied by the image inventory and photograph and audiovisual authorization form as set out below.</p> <p>At least one photograph that may be used on the public web page illustrating the property shall be included.</p> <p>States Parties are encouraged to grant to UNESCO, in written form and free of charge, the non exclusive cession of rights to diffuse, to communicate to the public, to publish, to reproduce, to exploit, in any form and on any support, including digital, all or part of the images provided and license these rights to third parties.</p> <p>The non exclusive cession of rights does not impinge upon intellectual property rights (rights of the photographer / director of the video or copyright owner if different) and that when the images are distributed by UNESCO a credit to the photographer / director of the video is always given, if clearly provided in the form.</p> <p>All possible profits deriving from such cession of rights will go to the World Heritage Fund.</p>
---	---

**PHOTOGRAPHS AND AUDIOVISUAL IMAGE INVENTORY
AND AUTHORIZATION FORM**

Id. No	Format (slide/ print/ video)	Caption	Date of Photo (mo/yr)	Photographer/Director of the video	Copyright owner (if different than photographer/director of video)	Contact details of copyright owner (Name, address, tel/fax, and e-mail)	Non exclusive cession of rights

NOMINATION FORMAT	EXPLANATORY NOTES
7.b Texts relating to protective designation, copies of property management plans or documented management systems and extracts of other plans relevant to the property	Attach the texts as indicated in sections 5.b, 5.d and 5.e above.
7.c Form and date of most recent records or inventory of property	Provide a straightforward statement giving the form and date of the most recent records or inventory of the property. Only records that are still available should be described.
7.d Address where inventory, records and archives are held	Give the name and address of the agencies holding inventory records (buildings, monuments, flora or fauna species).

7.e Bibliography	List the principal published references, using standard bibliographic format.
8. Contact Information of responsible authorities	This section of the nomination will allow the Secretariat to provide the property with current information about World Heritage news and other issues.
8.a Preparer Name: Title: Address: City, Province/State, Country: Tel: Fax: E-mail:	Provide the name, address and other contact information of the individual responsible for preparing the nomination. If an e-mail address cannot be provided, the information must include a fax number.
8.b Official Local Institution/Agency	Provide the name of the agency, museum, institution, community or manager locally responsible for the management of the property. If the normal reporting institution is a national agency, please provide that contact information.
8.c Other Local Institutions	List the full name, address, telephone, fax and e-mail addresses of all museums, visitor centres and official tourism offices who should receive the free <i>World Heritage Newsletter</i> about events and issues related to World Heritage.

<p>8.d Official Web address</p> <p>http://</p> <p>Contact name:</p> <p>E-mail:</p>	<p>Please provide any existing official web addresses of the nominated property. Indicate if such web addresses are planned for the future with the contact name and e-mail address.</p>
<p>9. Signature on behalf of the State Party</p>	<p>The nomination should conclude with the signature of the official empowered to sign it on behalf of the State Party.</p>

Titre du stage

Mise en place d'un dossier de protection du patrimoine, Chettinad, Inde

Résumé :

L'objectif principal de ce stage a été de réunir les documents réalisés par l'ensemble des acteurs jouant un rôle dans la protection du Chettinad. Ceci dans le but de réaliser une ébauche de dossier de candidature de cette région à la liste du patrimoine mondial de l'UNESCO.

L'étude des réseaux d'eau traditionnels, élément clef de cette candidature, a mis en lumière les difficultés auxquelles doit faire face la mise en place d'une protection patrimoniale en Inde.

Mots-clés :

Inde du sud, Tamil Nadu, Chettinad, UNESCO, protection, patrimoine, réseau d'eau traditionnel.

Entreprise :

Anna University
Sarder Patel Road,
Old Highways Building,
Guindy,
Chennai - 600 025

[Tuteur Entreprise]: VEDAMUTHU Ranee
Chairman of Architecture and Planning Department

[Etudiant]: BUGEIA Camille DAE5 promo 2016

Abstract :

The main goal of this internship was to collect the documents made by all the actors playing a role in Chettinad Heritage protection. These data were used to make a draft of Chettinad application file for the UNESCO World Heritage List.

The focus on the traditional water system, key element of the application file, has highlighted the challenges faced by the establishment of an appropriate heritage protection in India.

Keywords :

South India, Tamil Nadu, Chettinad, UNESCO, protection, heritage, traditional water system.

[Tuteur académique]: VERDELLI Laura