

# HKIE-YMCA OVERSEAS DELEGATION 2015 TO THE NETHERLANDS

LIVING WITH WATER  
BUILDING WITH NATURE

## Water Studio

March 30 PM  
1300 - 1400 hr

The delegates visited the architectural firm Water Studio which specializes in the design of floating building, landscape, and urban planning solutions with floating components. Apart from the local developments, they have also worked on several floating projects in China, United Arab Emirate, and the Maldives. Architect Ms Ankie Stam shared the company's concepts on the possibilities of constructing flexible land on aquatic territories. This would essentially replace conventional building design which has the limitation on any dynamic change and requiring construction and demolition of buildings whenever there is changing demand of land. Ms Stam went further to elaborate their prediction on the top ten trends regarding to the use of floating city. Major points include:

- 1) scarless development - a constructed city can be removed easily to meet the need of the future generations;
- 2) flood and hurricane resilient city due to its floating nature;
- 3) instant green solution - allows integration of green landscape into developed cities where most of the land has been used for residential and commercial development; and
- 4) expanding the urban area with flexible components -develop a city that is easy to modify.

The delegates had a very fruitful experience and gained comprehensive insights on the potential of new floating solutions. The visit ended with a souvenir presentation with our HKIE President Ir Victor Cheung and our Delegation Manager Ir Kenneth Cheung to thank the presenters.



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### Application of living with water in Hong Kong

In Hong Kong, the most popular use of floating house is found in the Aberdeen Floating Village which consist of approximately 600 junks to accommodate the residents who are mostly fishermen. Living on water in Hong Kong is a tradition inherited from its history, rather than a solution to future development. Nevertheless, as an archipelago city Hong Kong has the potential to adopt the floating technology to a wider extent.

### Advantage of extending the city into the aquatic territories

Energy efficient solution - Building on water opens for the possibility of using the sea water as a temperature controller with less energy input on air conditioning system. One of the most typical examples is the Floating Mosque in Dubai that has been designed by Waterstudio, the wall panels and columns of the mosque are both designed to have water

flowing in their interior. Not only can it provides an iconic architectural feature, it also acts a heat insulator against the extreme temperature outdoor. (TEDx talk, 2014)

one solution for Hong Kong's introduction of golf course to public. (Waterstudio, 2013)



The Floating Mosque in Dubai with water flowing in columns  
(Retrieved from <http://www.waterstudio.nl/projects/30>)



Floating Golfcourse in Maldives  
(Retrieved from [http://1.telegraph.co.uk/multimedia/archive/02309/Floating-Golf-Cour\\_2309760.jpg](http://1.telegraph.co.uk/multimedia/archive/02309/Floating-Golf-Cour_2309760.jpg))

### Improvement on variety of land use

As a commercial city, land scarcity is the most critical problem in Hong Kong. The land use is mostly focused on commercial and residential buildings to support the economic activities and the high demand of living houses. With the use of floating buildings, more recreational facilities such as green parks and sports facilities which have a lower land economic turnover but vitally important for both the health and social aspects of the citizens can be brought into Hong Kong. The Floating Golf Course in Maldives designed by the architect Waterstudio, can be

Creation of dynamic city with high mobility - Furthermore, since floating modules can be easily relocated and substituted by other like the shifting of ships. It eases the difficulties in city planning and minimises the need of demolition for any change of land use. This allows the future course to easily relocate the constructed houses or infrastructure on water without significant demolition, giving a scarless development. For the urban fabric that expands into the water, the choice on urban components are flexible and can be alternated to meet any future change in city planning. (Koen Olthuis & David Keuning, 2010)

### Challenges on application of floating technology in Hong Kong

Despite of the advantages in terms of energy sustainability and flexibility in city planning, there are several obstacles which limit the use of floating technology in Hong Kong. Firstly, adapting floating houses come with higher initial cost as it is a relatively new idea and has not been moved into

mass production yet. Secondly, floating house involves private ownership of aquatic territories which can be controversial. Furthermore, the demands of high building and resilience to typhoon are crucial factors in Hong Kong and are less considered in the Netherlands. The development of government recognised design regulation for floating house might also be one of the most difficult challenges.