

Sponge City Program (SCP) in Transition: Opportunities via Social Media

After 6 years, Ningbo's Sponge City Program has transformed from a mostly government-led initiative to a movement gaining widespread support on social media, said Faith Chan, Lei Li and Dimple Thadani, researchers from the University of Nottingham Ningbo China (UNNC).

Urban Floods in Chinese Cities

Urban floods have been a major concern in China due to climate change and urbanization, endangering the safety of local citizens. More than 351 Chinese cities, including several major ones, experienced urban flooding from 2008 to 2010.

Sponge City Program

The Sponge City Program (SCP) initiated in 2013 by China's national government is based on a new concept that addresses urban floods through rainwater collection, purification, storage, and re-use. The SCP is leveraging soft-engineered measures such as Blue-Green Infrastructure (BGI) design and Low Impact Development (LID), with the aim of reducing the occurrence of urban floods to once-every- thirty- years- or- longer, a standard adopted by many other major Asian cities. Ningbo was among the second group of Chinese cities to be designated as pilot Sponge Cities, and consistently outperforms most other pilots.

Opportunities for Better SCP Delivery?

The targets of SCP, as set forth by China's national guidelines, are very ambitious. By 2020, 20% of urban areas are to have SCP infrastructure; by 2030, 80% of urban areas should be able to absorb and re-use at least 70% of rainfall. However, doubts and uncertainties have been raised regarding the effectiveness of SCP in urban flood control. The public often questions large investments in SCP.

In the current study under-



▲ An artificial lake in Cicheng township, Jiangbei district, Ningbo.
[Photo by Wang Peng]
◀ Dr Faith Chan, Miss Lei Li and Dr Dimple R. Thadani.
[Photo provided to Ningbo Times]



taken by the UNNC researchers, the aim is to investigate the stakeholders' perception and understanding of SCP in all SCP cities. It was found that social acceptance of SCP implementation is associated with the intellectual elements (include cultural shift and perceptions change) of the practitioners, developers, and the public. An improved perception of the SCP could make formulating pro-SCP/BGI policies easier; it also has the added benefits of facilitating the update of engineering standards for Sponge City infrastructure and creating a market for BGI stewardship, paving the way towards greater sustainability.

There are many published scientific papers on SCP, but they could be all but incomprehensible to the general public. Therefore, the power of social

media should be leveraged so the public could have access to information and space to voice their opinions. Social media is also a good place for relevant stakeholders to identify public concern (by analyzing online comments, reblog activity, newspaper articles, and personal posts etc.), thus improving and transforming SCP practice.

Social media is a useful tool for recognizing the public's incomprehension, misunderstanding, resistance, and fear surrounding new and unfamiliar BGI design and SCP facilities. Citizens' mindset is a subtle factor that could influence policy makers, developers, and water engineers. Therefore, earning the public's trust and support of SCP/BGI is critical to its success.

What Does the Future Hold for SCP?

During the last few years, several successful SCP projects

have been established in Shenzhen, Wuhan, Beijing, Ningbo, and other Chinese cities. By tailoring flood control approaches to each area's characteristics, it is possible to overcome technical and management challenges during the implementation of the program. Notably, the use of social media has shaped the public's and stakeholders' perception of SCP for the better, mainly by facilitating dialogue between communities, engineers, decision-makers and developers. Social media has improved the effectiveness of SCP implementation. Increasingly, policy change is now driven by the public and media in a bottom-up fashion.

International news coverage reveals clearly that SCP is gaining global influence. The practice is by no means limited to Chinese cities; it has earned "brand recognition" worldwide, boosting the image and international renown of any city that undertakes SCP.

China is not the first coun-

try to embrace BGI design. Singapore, Berlin, Sydney, and many cities in the US are also taking eco-friendly approaches in water management, though under differing names. Going forward, SCP could be a new way to foster a greener future for cities, mitigating the threats of climate change and urban floods while coping with the stresses of population growth and increased urbanization.

Authors:

Dr Faith Chan (Associate Professor, School of Geographical Sciences, University of Nottingham Ningbo China)

Miss Lei Li (Postgraduate Researcher on Nature-based Solutions, Blue-Green Infrastructure and Sponge Cities, School of Geographical Sciences, University of Nottingham Ningbo China)

Dr Dimple R. Thadani (Assistant Professor, Nottingham University Business School China, University of Nottingham Ningbo China)



SPOTLIGHT

Innovations Improve Seed Industry

By Jin Lu

Recently, Liao Huimin of Ningbo Weimeng Seed Co., Ltd. told our correspondent that thanks to a talented R&D team, the company has taken Zhejiang's top spot in melon and vegetable seed cultivation.

"Last year's sales exceeded 100 million yuan. In 2019, our company's output ranked fourth nationally. It is expected that some of our seeds may even make it into international rankings soon," she added.

Bo Yongming, the founder of Weimeng Seed, was born in Ningbo. After graduating from university in 1992, he was recruited by the Ningbo Seed Company and began to learn about fruit and vegetable cultivation.

In those years, rice farming in Ningbo was developing rap-

idly, but very few dedicated themselves to fruit and vegetable farming. This inspired Bo Yongming to start his own business.

In August 2012, Bo Yongming left his employer of 20 years and co-founded Ningbo Weimeng Seed Co., Ltd.

Seeds are a critical strategic resource in agricultural development. Those in the agricultural sector often say that whoever develops the best seeds will occupy the high ground in the market and industry.

Through scientific research, Weimeng Seed Company was able to end its dependence on foreign seeds, replacing imported seeds with their independently-developed varieties. In 2016, the company won the title "national high-tech enterprise".

"Most of our products are independently-developed," In Bo Yongming's view, enterprises

must consistently recruit top technical talents and cooperate with universities to gain access to the latest technology.

One of Weimeng Seed's partners is Zhejiang University. "We need advanced technology, while universities want to work with an application-oriented organization such as Weimeng Seed to commercialize their research results. Thus, such a partnership is a win-win situation for both sides," Bo said.

In 2018, Weimeng became one of the first companies to move into the new Zhejiang Innovation Center in Ningbo, hoping to achieve faster development. "After moving to the center of the city, we have become more attractive to science and technology talents," Bo said that the company benefited a lot from the central location of the Zhejiang Innovation Center, es-



The laboratory of Ningbo Weimeng Seed Co., Ltd.
[Photo by Jin Lu]

pecially its proximity to quality public facilities such as residential neighborhoods, schools, and hospitals.

On average, the company uses 10% of its annual sales revenue on R&D; last year, the

figure reached 11%.

In the past five years, the seeds developed by Weimeng Seed were sown over 16.7 million acres of farmland, helping farmers to increase production and income by 3 billion yuan.

INFO&TIPS

Where to Go for Water Sports in Ningbo? Follow this Guide

By Dong Na

As the weather gradually warms up, it's time to resume your favorite outdoor activities. Want to know what kinds of water sports are currently available in Ningbo? Here is a guide on Ningbo's top water sports venues, compiled by *Ningbo Times* for your reference.

The Coastline Kayak Club is located near Dongqian Lake and provides competition training, qualification assessment, equipment sales, event planning, and other services for amateur kayaking fans. At the Club, outdoor enthusiasts can participate in recreational kayaking and many other types of water sports. There is also the nearby Yifan Sailing Club, dedicated to promoting the sport of sailing and other water sports across China. It has been organizing athletes to participate in various water sports competitions for many years. Yifan offers sailing, windsurfing, kayaking, paddle boarding, rowing and more.

In Meishan Bay, Wanboyu Yacht Club is an ideal destination. This is a 230,000 m² yacht-themed resort developed by Wannian Jiye Culture and Tourism Group. The club has twenty FAREAST 28-foot sports sailboats. It offers individual and group sailing trips, corporate team building events, and many other types of activities. Being the largest sailing base in Ningbo, its vessels have an overall capacity of up to 160 passengers. The resort has speed boats, motor boats, drift boats, water crafts, banana boats, kayaks and other marine entertainment equipment for visitors.

The Ningbo Binhai Tourism and Leisure Zone in Fenghua hosts swimming marathons, triathlons, and international cross-country hiking events. It is a national training center for kayaking and rowing. The main sports available include kayaking, rowing, sailing, paddle boarding and more.

Last but not least, there is the Jiangbei MIXC Water Sports Park. It is the first water sports theme park in Ningbo. The park has a gym open to all citizens and offers amateur and competitive training courses all year round. Citizens can enjoy kayaking, rowing, paddle boarding, canoe slalom, dragon boating and more. In the future, the park will focus on improving and expanding its range of sports as well as organizing competitions and citizen events, with the aim of becoming a top destination for aquatic activities.

Chief Adviser: Zhao Qingchuan
Proofreader: Gou Wen

