Frederick Lee
Faculty of Social Sciences
The University of Hong Kong
Water footprint of an individual = Direct water use (Real water) + Indirect water use (Virtual water)

Direct water use:
- Drinking
- Cooking
- Bathing
180 litre/day

Indirect water use:
- Food
- Clothes
- Paper

? litre/day
Virtual Water

Water used up in production processes is *invisible* to us.

WF: Reveals this “*hidden*” water.

WF: Helps us visualise the connections between our *consumption* habits and the world’s *freshwater* resources.
Water Footprint of a product

What is the **virtual water** content of these items?

A sheet of A4 **paper**

- 10 litres

A cup of **coffee**

- 130 litres

A cotton **T-shirt**

- 2,000 litres
Components of Water Footprint

- **Green** Water Footprint
  - *Rainwater*

- **Blue** Water Footprint
  - *Surface water + groundwater*

- **Grey** Water Footprint
  - *Dilute pollution*
Tomatoes imported into Hong Kong

Israel

- Grey: 38%
- Blue: 36%
- Green: 26%

China

- Green: 64%
- Grey: 35%
- Blue: 1%

Tomatoes price:

- Hong Kong: 284 l/kg
- Local: 85 l/kg
Water Footprint of animal products

- Direct water use (drinking water)
- Composition of feed
- Origin of feed ingredients

Beef (15,415 litre/kg)
98% = feed
What is Water Footprint?

An innovative concept
- Impacts of our consumption on world’s freshwater

An indicator of our water use
- Direct + Indirect

A multidimensional indicator
- Where?
- When?
- Which?
How to reduce your Water Footprint?

- Do not waste food

> 50% of a person’s WF = Food

- Find alternative sources of protein

(Legume)
How should we respond to water scarcity in a globalised world?

Know your Water Footprint
- Hong Kong: relies heavily on imports

JC-WISE Water Footprint Calculator
- First-of-its-kind
- Popular local dishes
JC-WISE Water Footprint Calculator

- Web-based Calculator:  [www.jcwise.com/wfc](http://www.jcwise.com/wfc)
- Mobile App: Download at App Store (iOS) or Play Store (Android)
Water Footprint of our meals

Let’s find out the virtual water content of meal (A):

Total: 1,320 litres

Satay beef burger: 1,254 litres

Lemon tea: 66 litres
Let’s find out the **virtual water** content of meal (B):

**Total:** _____ litres

- Steamed pork dumplings: _____ litres
- Turnip cake: _____ litres
- Steamed shrimp dumplings: _____ litres
Jockey Club Water Initiative on Sustainability and Engagement (JC-WISE) is a 3-year, HK$14.7 million project funded by The Hong Kong Jockey Club Charities Trust and hosted by the Faculty of Social Sciences, HKU. It aims to raise the public’s awareness, and appreciation, of the importance of attaining long-term water sustainability for Hong Kong.