



WE ARE USING A LOT MORE WATER THAN WE THINK!

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同心同步同進 RIDING HIGH TOGETHER



Outline

1. Water Footprint of an individual
2. How to calculate the Water Footprint of food?
3. Factors that account for differences in Water Footprint of food
4. Why should we care about the Water Footprint of food?
5. How to reduce our Water Footprint?

PART 1:

the Water Footprint of an individual



An individual's Water Footprint



=

Direct water use

(real water)

- Drinking
- Cooking
- Bathing

219 litres/day

+

Indirect water use

(virtual water)

- Food
- Clothes
- Paper

? litres/day

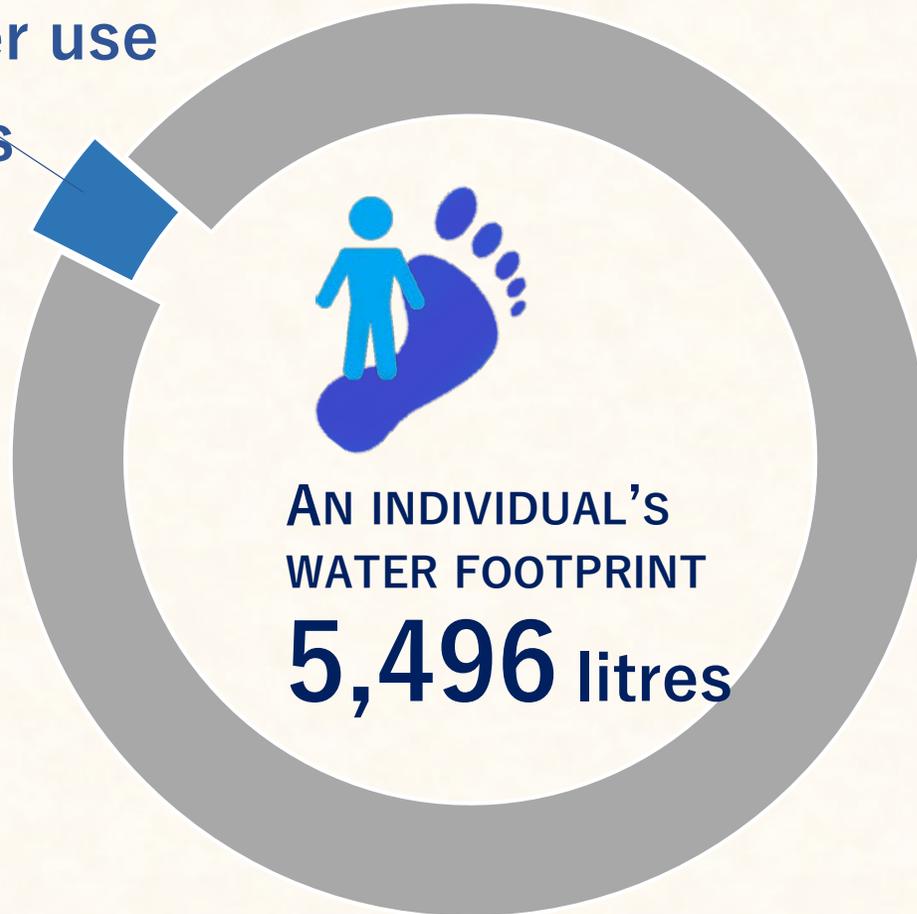
Only 4% of an individual's Water Footprint is related to **direct** water use



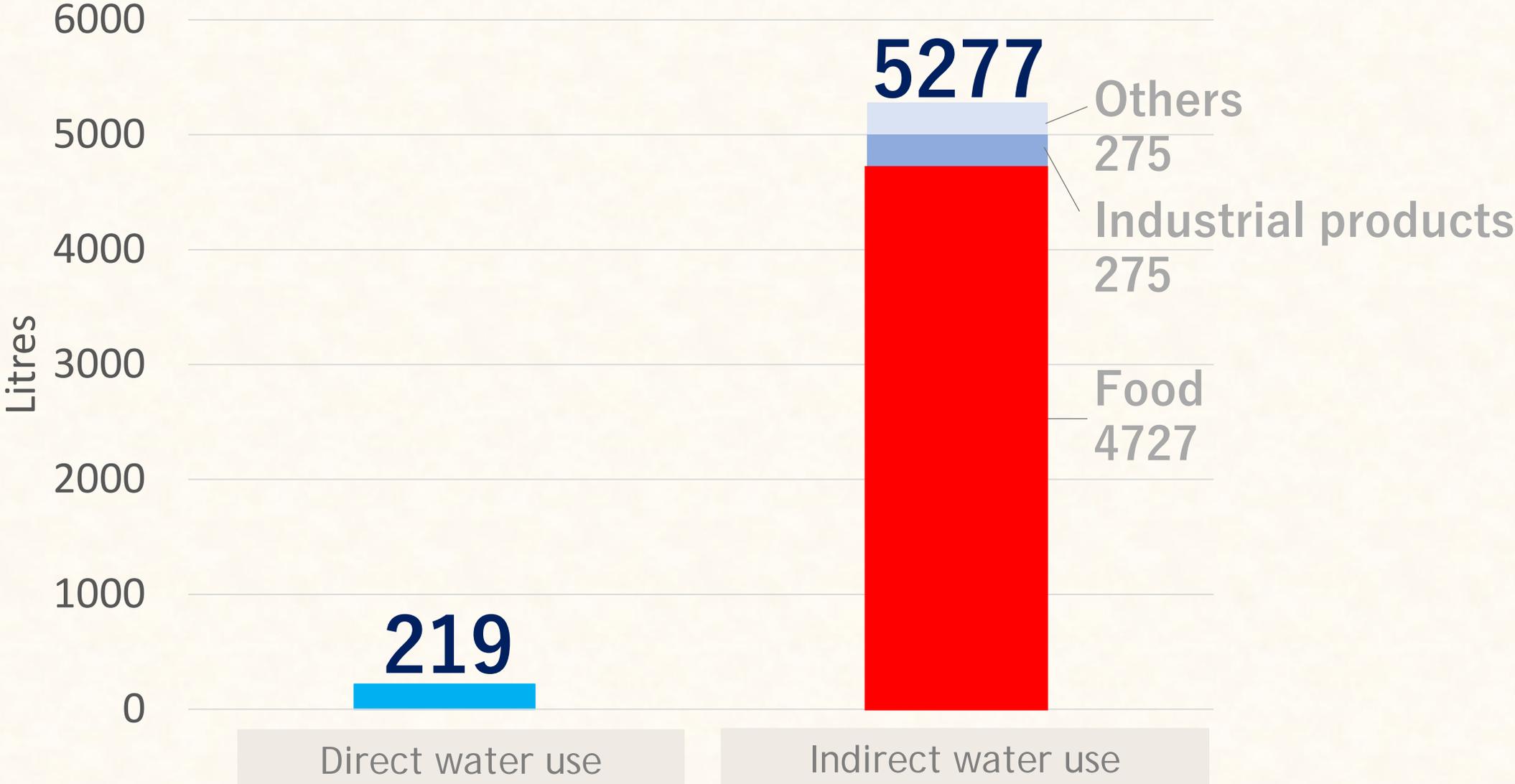
Direct water use
219 litres



AN INDIVIDUAL'S
WATER FOOTPRINT
5,496 litres



Indirect water use is 24 times direct water use

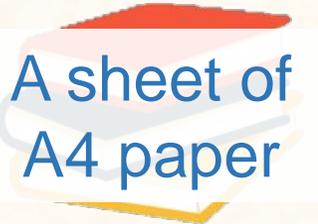


Indirect water use



An apple

205 litres (*virtual water*)



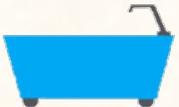
A sheet of A4 paper

10 litres (*virtual water*)



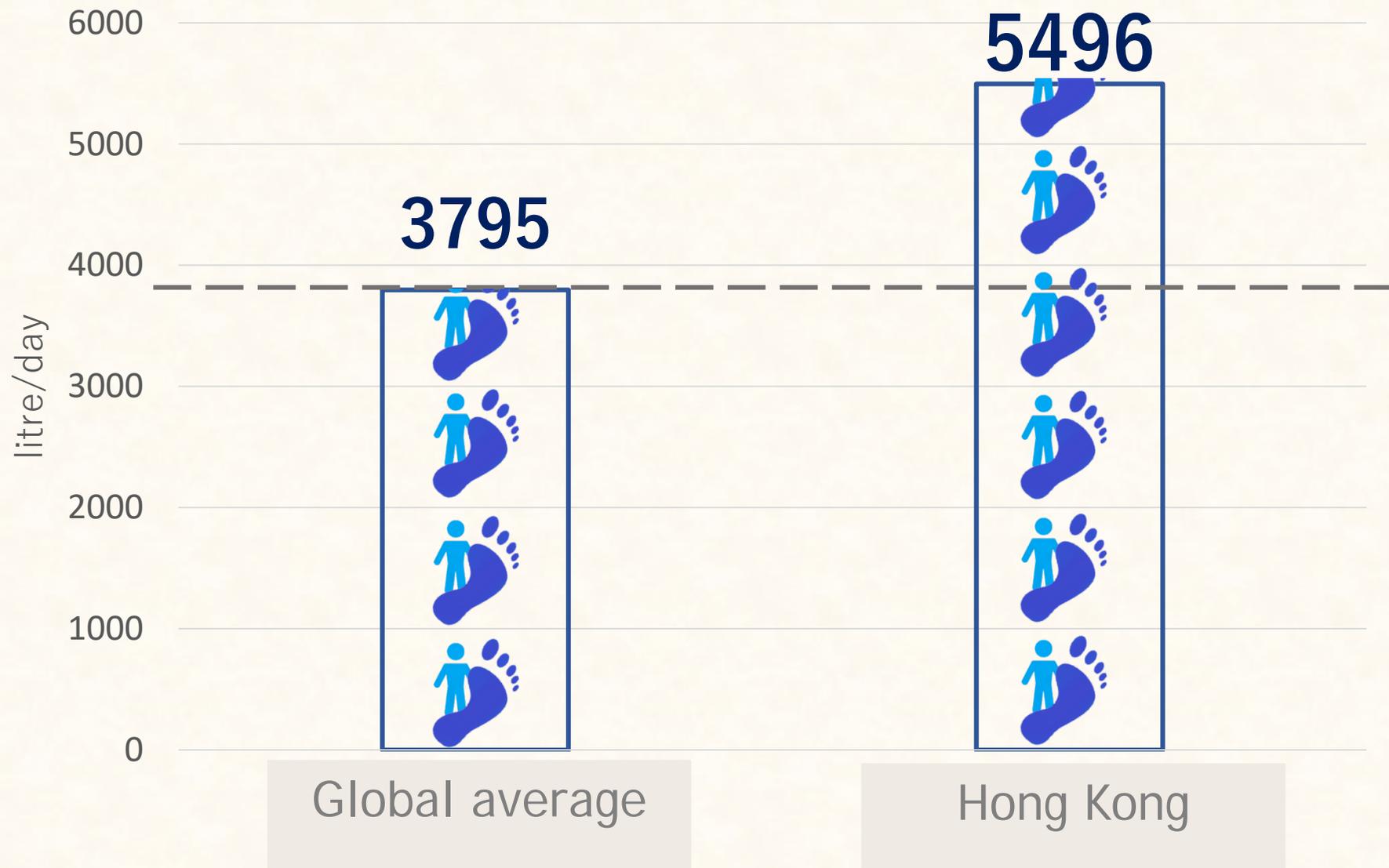
A cotton T-shirt

2000 litres (*virtual water*)



Each bathtub represents 150 litres of water

The Water Footprint of an average person in Hong Kong is **1.4** times that of the global average



Three Components of Water Footprint



 **Green Water Footprint**
• *Rainwater*

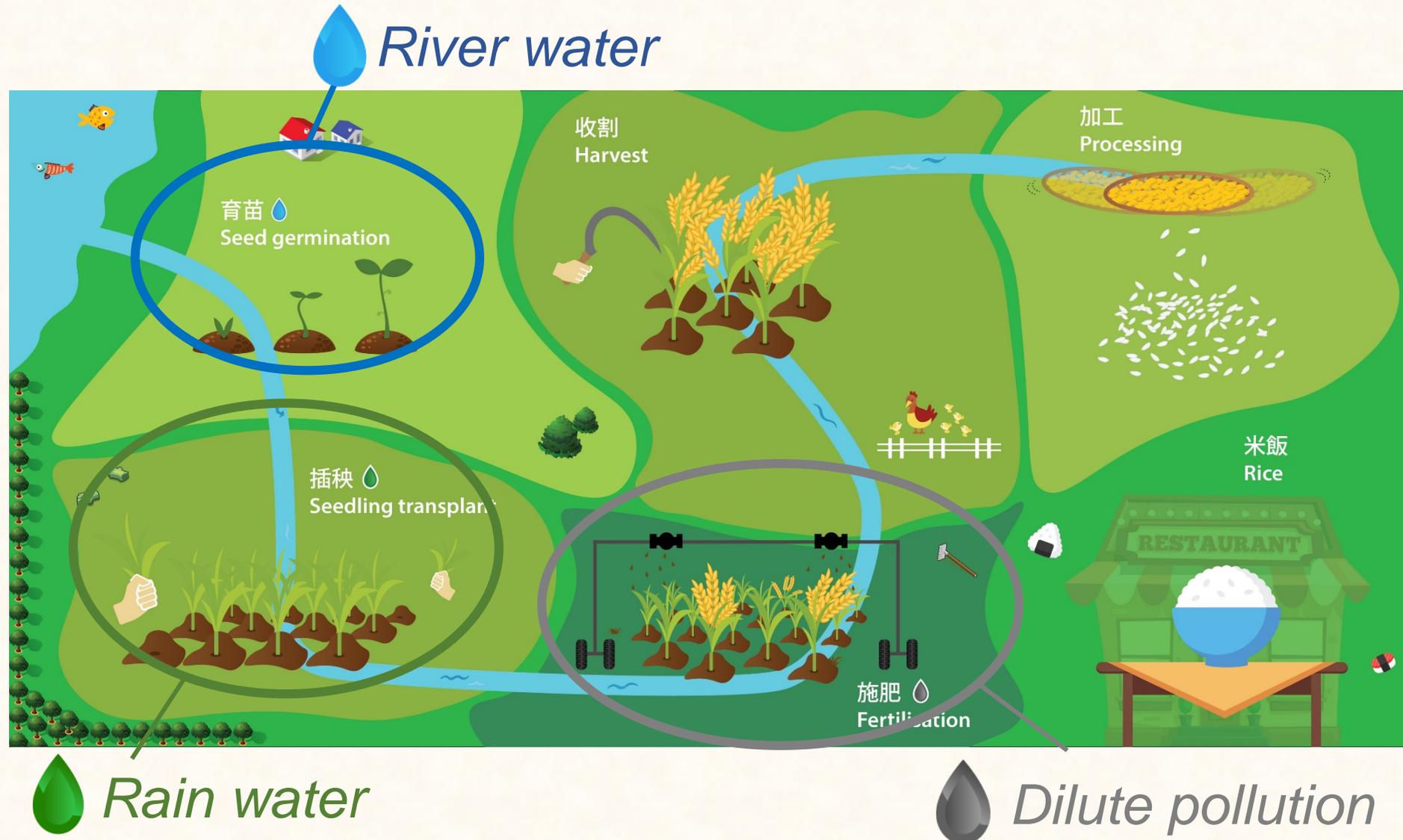


 **Blue Water Footprint**
• *River water*



 **Grey Water Footprint**
• *Dilute pollution*

Water resources are used up in each stage of food production process



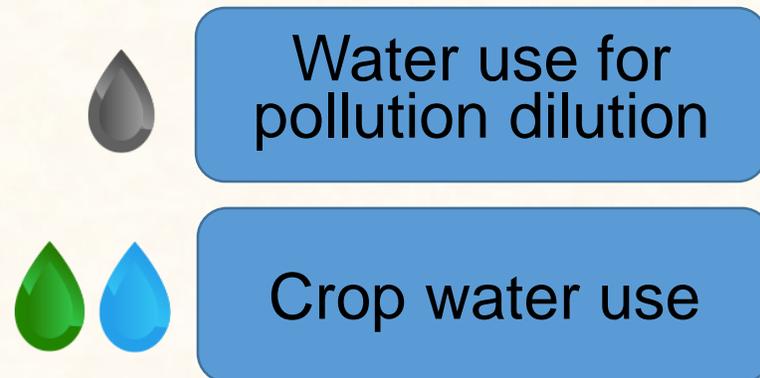
PART 2 :

The Water Footprint of food products

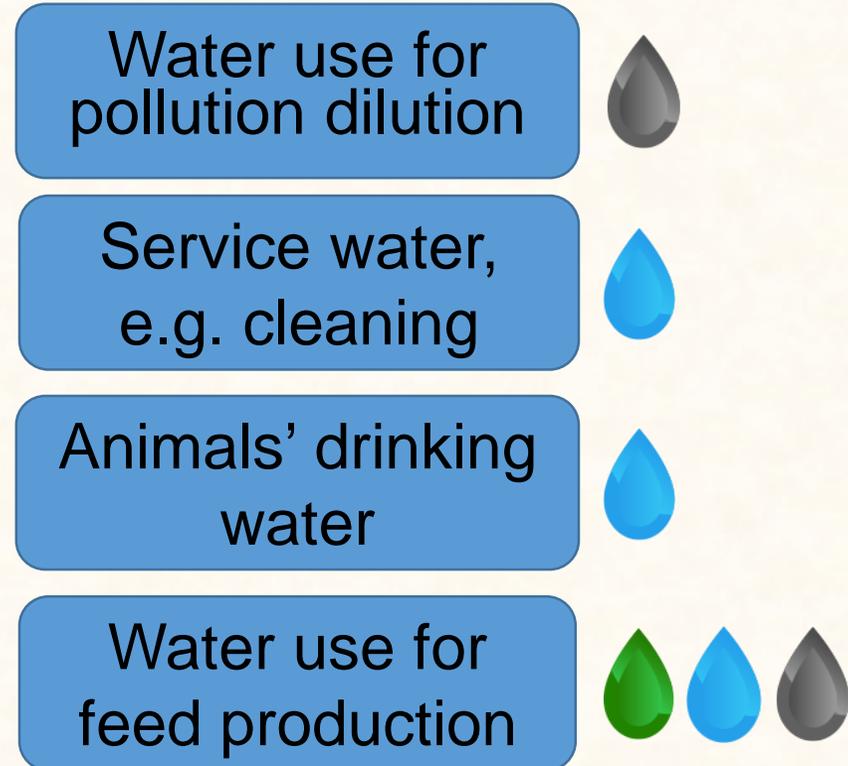


How do we **calculate** the Water Footprint of food products?

Farm produce



Poultry & livestock



PART 3 :

Factors that account for differences in the Water Footprint of food

Factors that account for differences in the Water Footprint of poultry, livestock and farmed fish

Growth period

Feed intake

Composition of feed

Process water requirements



Can you guess which food product has a larger Water Footprint?



Chicken, chilled

4,325 litre/kg



Beef, chilled

15,415 litre/kg



A cow consumes much more feed than a chicken in its lifetime, and hence the larger Water Footprint

	Chicken	Cow
Growth period	6 to 8 weeks	2 to 3 years
Daily feed intake	$\frac{1}{4}$ pound	27 pounds



Why does beef have such a large Water Footprint?



Factors that account for differences in the Water Footprint of farm produce

Growth period
(annual/perennial)

Soil water
availability

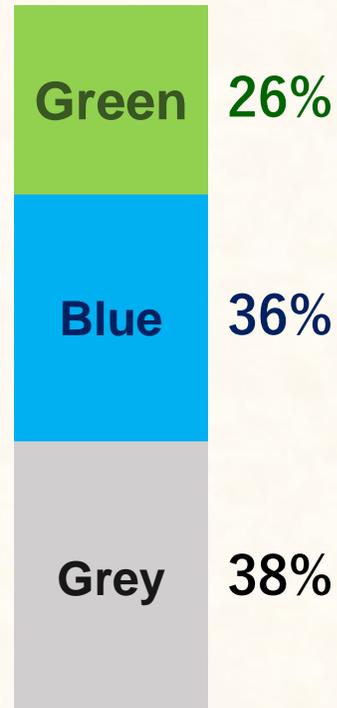
Climate
(tropical/
temperate)

Farming practices



The size and composition of the Water Footprint of food vary according to agricultural practices and irrigation methods

Israel



China



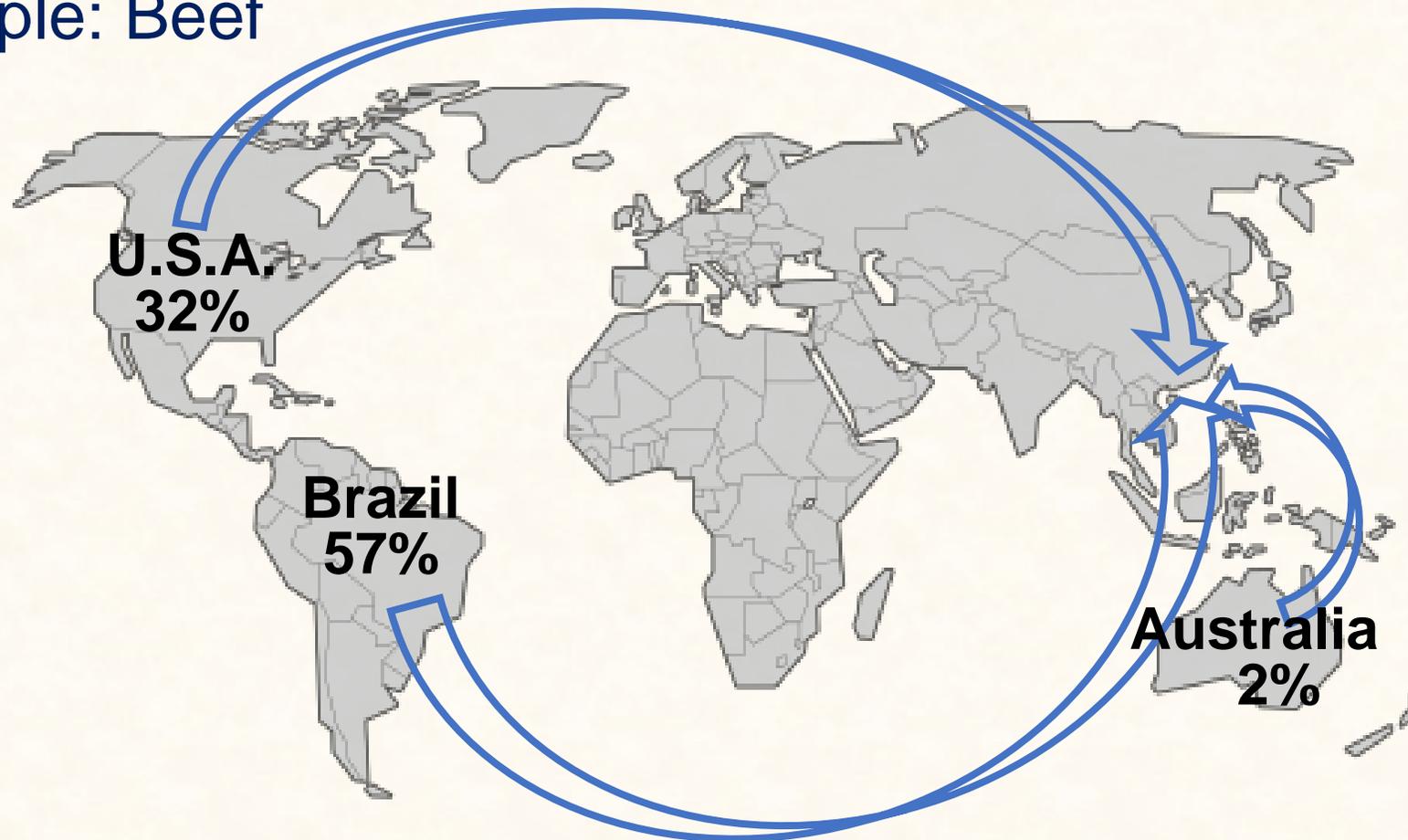
PART 4:

Why should we care about the Water Footprint of food?



While importing foods, we are consuming water resources in other parts of the world

- More than **90%** of Hong Kong's food supply is **imported**
- Example: Beef

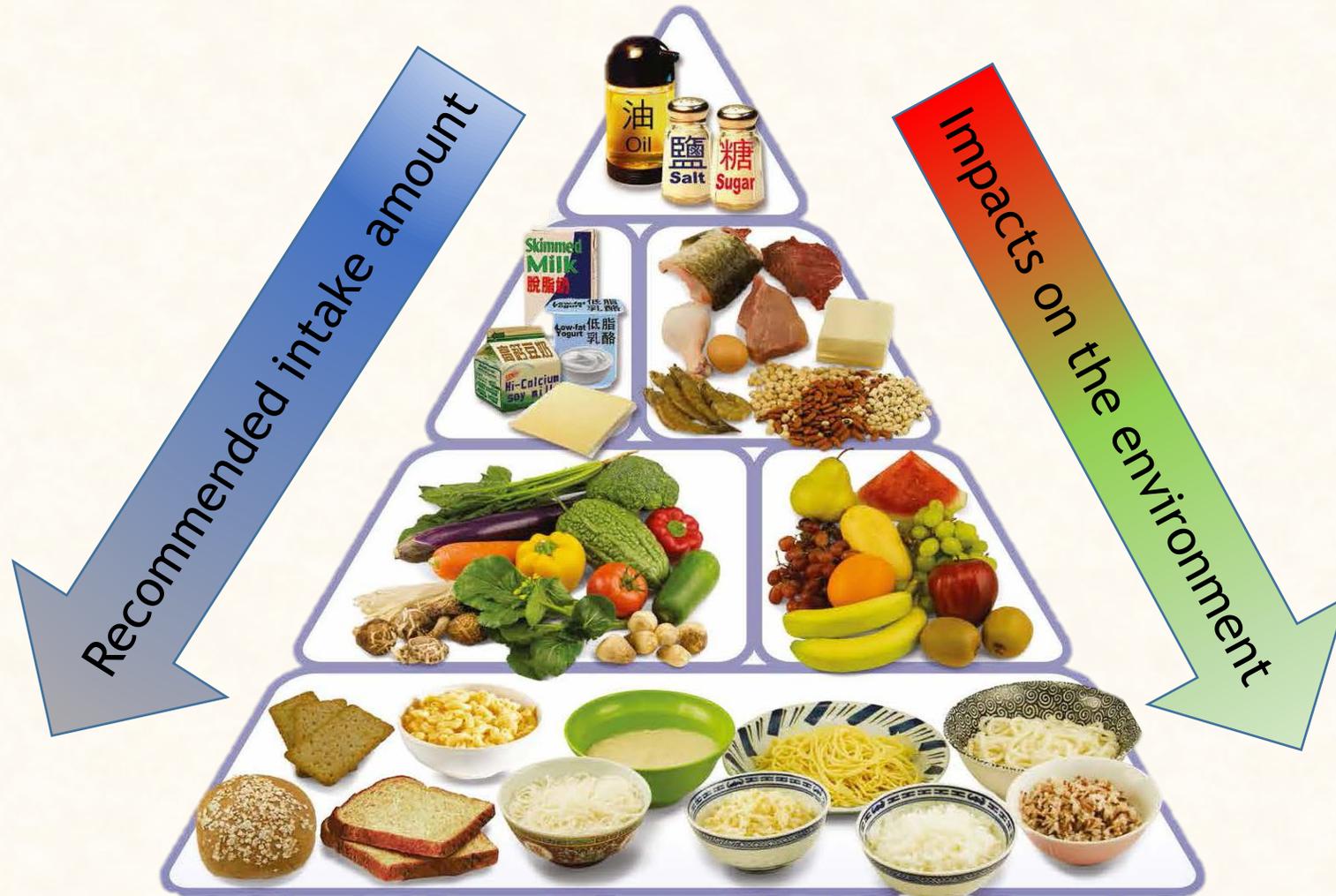


PART 5:

How to reduce our Water Footprint?



Eat **less meat** and eat **more veggie**; and we will help conserve water





Reduce food wastage; and we will help reduce our Water Footprint

- ◆ **3,662 tons** of food waste went to landfills in Hong Kong everyday
- ◆ Equivalent to wasting **4.9 million m³** of virtual water



Conclusion

- ◆ We use far more water than we think
- ◆ Virtual water (embedded in goods) is often neglected
- ◆ Food makes up 90% of our Water Footprint:
A healthy diet & zero food waste help conserve water



JC-WISE Water Footprint Calculator

- ◆ HK's first evidence-based Water Footprint Calculator (www.jcwise.hk/wfc)



- ◆ Mobile app:
For both iOS & Android





Water Footprint of our meals

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

Total: 1,322 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



Steamed shrimp
dumplings

_____ litres



Oolong tea

_____ litres



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