



# FACULTY OF LAW

# SAVING OUR FOOD

**Chris McElwain**  
**Teaching Fellow &**  
**PhD Candidate**

# SAVING OUR FOOD – THE GLOBAL SCALE OF WASTED FOOD

Wasting food is one of our largest market and regulatory failures

Humans waste approximately one third of all the food we grow, harvest or make

In 2011 the UN's Food and Agriculture Organisation estimated **1.3 billion metric tonnes** of food was wasted each year

In 2018 the Boston Consulting Group estimated **1.45 billion metric tonnes** of food is wasted each year

# SAVING OUR FOOD – THE GLOBAL SCALE OF WASTED FOOD

This also wastes all the energy, water, soil, land, biodiversity, chemicals, money and work it takes to make that food

UN's FAO estimated wasted food costs the global economy **US\$2.6 trillion** in direct and indirect costs

If the greenhouse gas emissions from wasted food were from 1 nation, it would be **third behind the USA and China**

Wasted food uses up **250 cubic kilometres of “blue water”** (fresh water)



## SAVING OUR FOOD – WASTED FOOD IN INDIA

Around **67 million tonnes of food is wasted in India** every year - enough to feed all of Bihar for a year

Annually, close to **21 million metric tonnes of wheat rots in India**; a figure that is equal to Australia's total annual wheat production

Former Indian Agriculture Minister Sharad Pawar estimated **US\$8.3 billion** of all food produced is wasted - 40% of value

Source: Clean India Journal, 2018 / Asit Biswas @ World Economic Forum, 2018

Image: ABC/N Zoglaurer/Getty Images

# SAVING OUR FOOD – WASTED FOOD IN AUSTRALIA

The Australian Government estimates wasted food costs A\$20 billion each year – This estimate is too low!

Australia households and businesses send **more than 5.3 million tonnes** of food waste to landfill every year

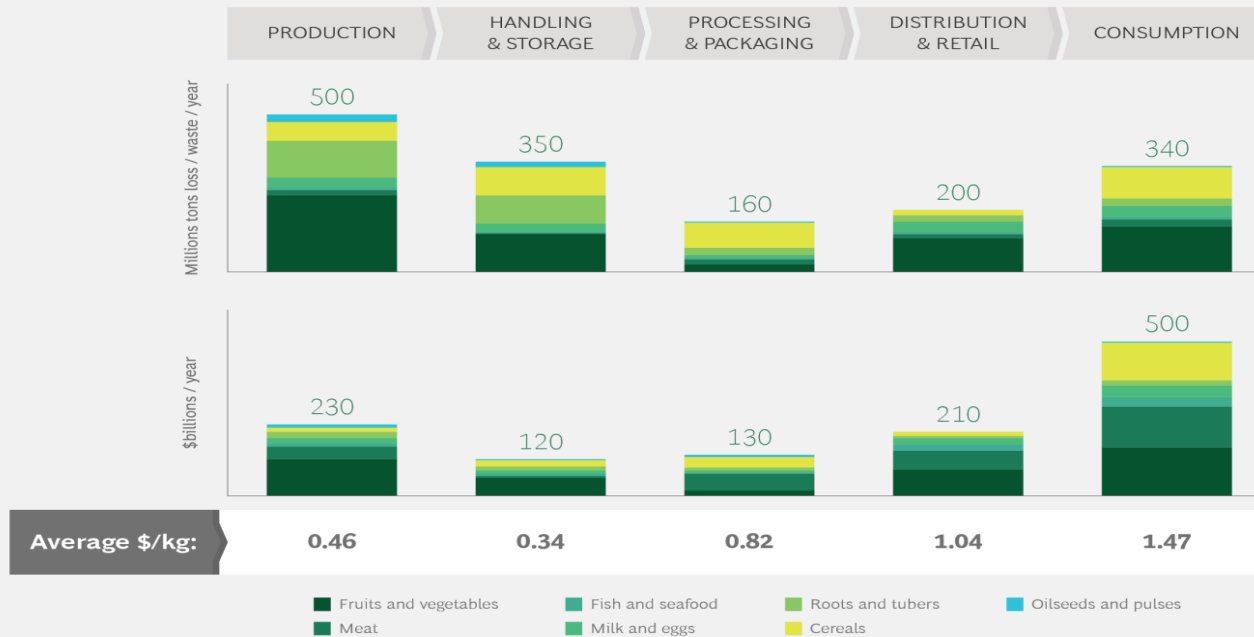
Australian businesses send **more than 2.2 million tonnes of food waste to landfill**, imposing significant production and disposal costs

Source: Australian National Food Waste Strategy, 2017

Image: ABC/N Zoglauer/Getty Images

# SAVING OUR FOOD – WHERE IS FOOD WASTED IN THE SUPPLY CHAIN?

EXHIBIT 1 | Food Loss and Waste Occur Across the Value Chain



**Sources:** Food and Agriculture Organization of the United Nations, *Global Food Losses and Food Waste*, 2011; FAOSTAT database; BCG FLOW model.  
**Note:** 2015 findings.

Source: Boston Consulting Group, 2018

# **SAVING OUR FOOD – WHY IS FOOD WASTED IN INDIA?**

**There are many reasons why food is wasted:**

- the absence of modern food distribution chains;**
- too few cold-storage centres and refrigerated trucks;**
- poor transportation facilities;**
- erratic electricity supply; and**
- the lack of incentives to invest in the sector.**

**The Indian Institute of Management in Kolkata estimates that cold-storage facilities are available for only 10% of perishable food products, leaving around 370 million tons of perishable products at risk.**

# SAVING OUR FOOD – WHY IS FOOD WASTED IN AUSTRALIA?

There are many reasons why food is wasted:

- the food grown on farms does not meet supermarket specifications;
- food is stored past its “use by” dates;
- waste in the processing of food eg potatoes; and
- high levels of waste in supermarkets, food retail businesses and households

For example, recent Australian research reveals that **at two medium sized, commercial tomato farms in Queensland, 55.3 tonnes (40%) and 29.6 tonnes (56%) of harvestable tomatoes did not reach consumers**

Source: Tara J. McKenzie et al, “Quantifying Postharvest Loss and the Implication of Market-Based Decisions: A Case Study of Two Commercial Domestic Tomato Supply Chains in Queensland, Australia” (2017) 3 *Horticulturae* 44.



# SAVING OUR FOOD – WHY IS FOOD WASTED IN AUSTRALIA?



Image: ABC/University of Sunshine Coast



# SAVING OUR FOOD – A GLOBAL CALL TO ACTION

## SUSTAINABLE DEVELOPMENT GOAL 12.3

**By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.**

# SAVING OUR FOOD – THE GLOBAL CALL TO ACTION

Meeting **SDG12.3** will also help to meet other SDGs:

**SDG 2.1**

By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

**SDG 2.4**

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality



# **SAVING OUR FOOD – NATIONS TAKING ACTION & MAKING GOALS**

## **SCOTLAND – 2010**

**To reduce all food waste arising in Scotland by 33% by 2025 and work with industry to reduce on-farm losses of edible produce**

## **USA - 2015**

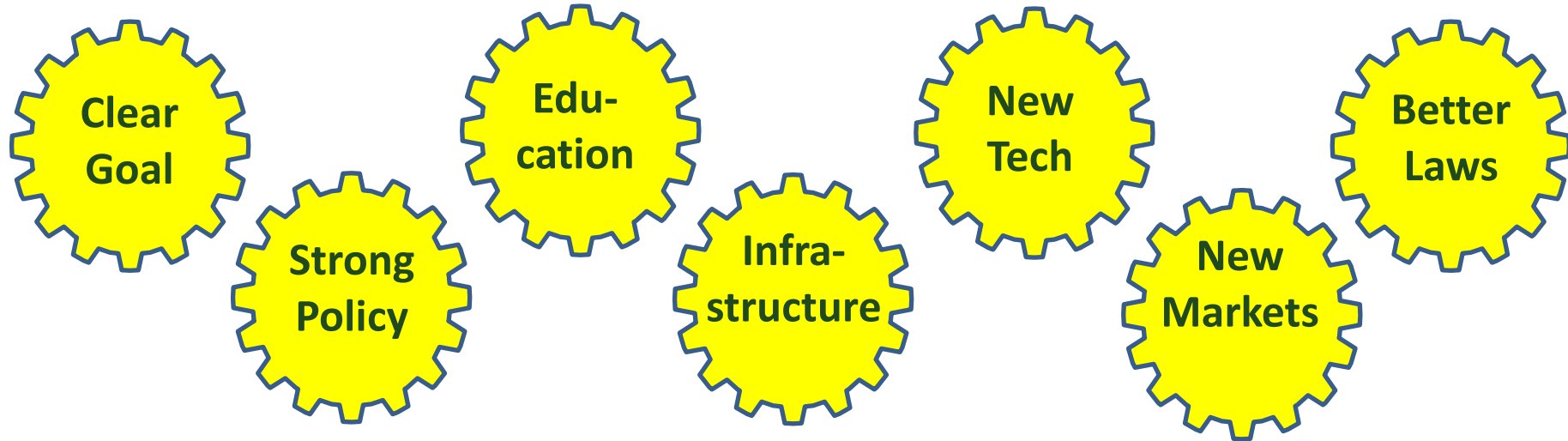
**The US Department of Agriculture and US EPA announced the first ever domestic goal to reduce food loss and waste by half by the year 2030**

## **AUSTRALIA – 2017**

**The National Food Waste Strategy provides a framework to support collective action towards halving Australia's food waste by 2030**



# SAVING OUR FOOD - USING SMART LAWS & POLICY



**Clear goals, strong policy and better laws are necessary but not enough.**

# SAVING OUR FOOD – MEASURING THE SCALE OF THE PROBLEM

Measuring the full scale of wasted food is complex and difficult.

UNEP & others are developing its Food Loss and Waste Accounting and Reporting Standard (FLW Protocol) – see here:

<http://flwprotocol.org/>

India could start by measuring the amount of food it wastes – see the early work of “Save Food Initiative” on losses in the value chain for chickpeas, mangoes, milk and rice.

Australia has only just started to develop methods for measuring the amount of food it wastes. This is not finalised.

# SAVING OUR FOOD – EDUCATION & AWARENESS

Raising awareness and education for business and households is crucial. This prompts individuals and businesses taking action and builds support for wider action.

FAO, UNEP and others have created the “Save Food Initiative”, mainly focusing on educating businesses, see here: <https://www.save-food.org/>

See also the “Love Food, Hate Waste” developed by the United Kingdom’s Waste & Resources Action Programme (WRAP) that focuses on households here: <https://partners.wrap.org.uk/campaigns/love-food-hate-waste/>

Two Australian states, New South Wales and Victoria, have adopted and adapted the “Love Food, Hate Waste” program but they have not been widely promoted.

## **SAVING OUR FOOD – GOALS, POLICY & LAW**

**New policies should make the goal clear (say by adopting SDG12.3) and set out the actions that will be taken to achieve that goal, including measuring progress towards that goal.**

**Some countries and sub-nation states have experimented with new laws to address food waste.**

**Scotland has regulations requiring households and businesses to separate out food waste and provide it to collection services run by local authorities. This cannot be sent to landfill, rather, it must be composted or sent for anaerobic digestion to make energy and fertiliser.**

## **SAVING OUR FOOD – SELF- REGULATION & TECHNOLOGY**

**Some large food business are setting their own goals and then reporting on there success in meeting there own goals, like Walmart in the USA, Tesco supermarkets in the UK and Coles supermarkets in Australia.**

**Food retail businesses like restaurants and hotels can benefit from using “smart scales” and associated software to measure the amount of food wasted in their kitchens and feed this back to chefs so that it can be minimised.**



# DOES INDIA NEED FOOD SAVING CHAMPIONS?

**We cannot be sustainable if we do not stop wasting food.**

**The United Nations has Goal 12.3 Champions who are leaders in taking action to prevent food from being wasted.**

**One of these champions is Mr Sunny Verghese - the Co-Founder, CEO and Group & Managing Director of Olam International**

**Perhaps an organisation or researchers or a research institute could take on the huge challenge of guiding India in saving its food?**

# FOOD LOSS or FOOD WASTE or WASTED FOOD?

There are no accepted definitions – but:

“**Food loss**” - food that is spilled or spoilt before it reaches the retail or final consumption destination.

“**Food waste**” - food that is available for consumption but is not consumed eg is thrown away.

I use the term “food waste” to mean both “food loss” and “food waste”.

“**Wasted food**” – means food that is wasted anywhere in the food supply chain - this term draws attention to the fact that what is at issue is **food, not waste**, and so gives it proper value