

# Fiscal policies for chemicals and waste management

## The role of agricultural subsidies

---

Colm Kennedy – UNEP Economy Division

---

# Governments have a key role to play in financing the sound management of chemicals and waste

---

Thousands of chemicals are used in the products and industrial processes within our modern economies. But the rapid increase in their use and disposal comes at a price for human health, nature and the environment.

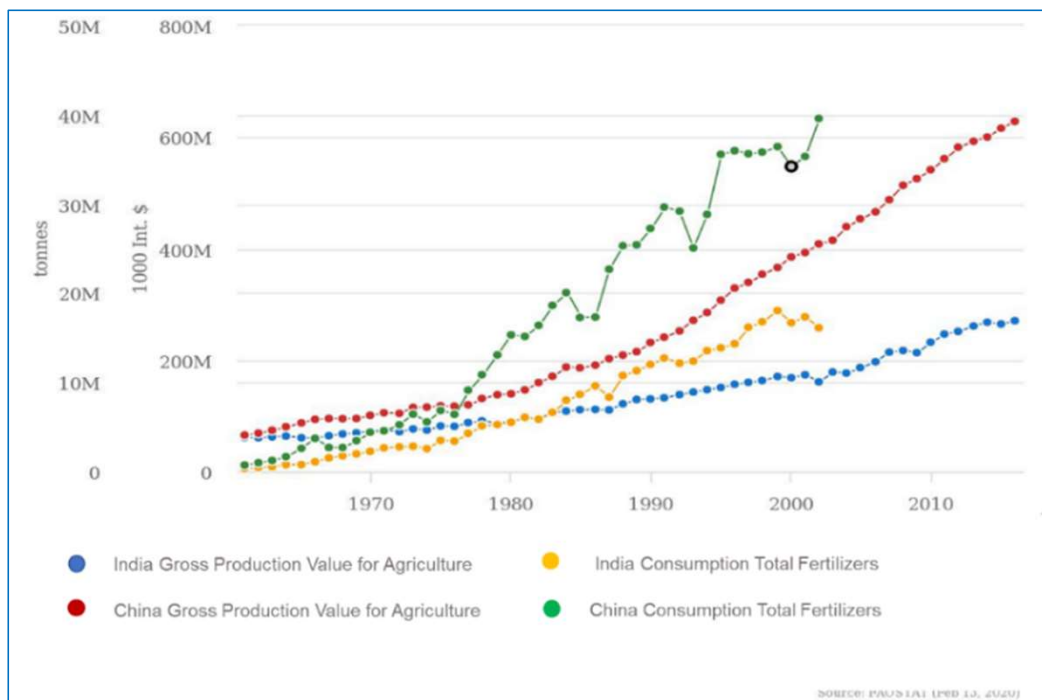
A comprehensive set of actors and policies is needed to effectively manage chemicals and waste.

In this, **public finance has a key role to play:**

- Direct **public investment and support** ,e.g. for environmental services – particularly in recovery packages
- Fiscal instruments (taxes, subsidies) can shift investment/production/consumption **decisions and behaviours**, and can create fiscal space for further investment
- Can help **level the playing field** for green financing (which is far from even!). Environmentally harmful subsidies exist which create adverse incentives, and directly contradict the aims of sound chemical and waste management **e.g., subsidies for harmful inputs such as fertilizers and pesticides.**

# Subsidies for pesticides and fertilizers is most common in developing countries, but they are widespread

Gross Production Value of Agriculture and Fertilizer Consumption in India and China (1960-2017)

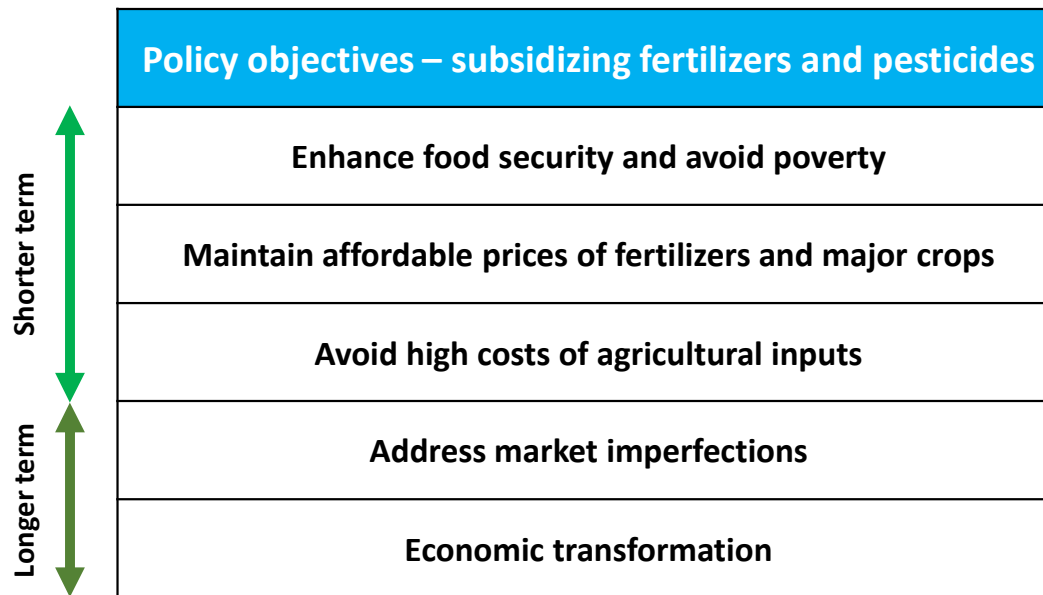


Source: FAOSTAT 2019

- Fertilizer subsidies were prevalent in the 1950s and 1960s, concentrated mostly on export crops.
- Rising fertilizer prices following the 1974 energy crisis led many developing countries to introduce fertilizer subsidies.
- By the late 2000s, 10 SSA countries were spending over US\$800 million annually on input subsidy programs. Indonesia alone was spending about US\$221 million in fertilizer subsidies
- Many developed countries apply reduced VAT rates to pesticides and fertilizers e.g., Italy, Switzerland, South Korea

# There are legitimate reasons why governments provide subsidies for fertilizers and pesticides

Historically, pesticides and fertilizers have been perceived as key agricultural inputs, capable of generating and maintaining high yields from available agricultural land and increasing agricultural productivity. In the current context of rising energy prices and food security concerns, these may be even more appealing to policymakers.



## But... subsidies can create adverse incentives, leading to the over- or misuse of pesticides and fertilizers

<b>Health Impacts</b>	<ul style="list-style-type: none"><li>• Chemical-induced disease or morbidity</li><li>• Nutritional deficiencies and stunting</li><li>• Disproportional health risks to poor and marginal populations</li></ul>
<b>Economic Impacts</b>	<ul style="list-style-type: none"><li>• Significant fiscal burden</li><li>• Limited effects on reducing poverty incidence</li><li>• Undermining of welfare maximization</li><li>• Crowding out</li><li>• Diversion of subsidy programs</li></ul>
<b>Equity Impacts</b>	<ul style="list-style-type: none"><li>• Gender biases in the targeting of subsidies</li><li>• Mismanagement of funds and elite capture</li><li>• Ineffectiveness in reaching poor smallholder farmers</li></ul>
<b>Environmental Impacts</b>	<ul style="list-style-type: none"><li>• Groundwater pollution and surface water eutrophication</li><li>• Soil degradation and acidification</li><li>• Biodiversity loss and GHG emissions</li></ul>

# Reform and repurposing options and case studies exist, but must be carefully designed

- **Clear** policy objectives and targeting
- Fiscal policies are **most effective as part of a toolbox of complementary policies** such as regulations, awareness and communication campaigns
- Assess the **availability of alternatives** (e.g., nature-based solutions, organic fertilizers)
- Consider the **distributional impacts**, and ways to mitigate negative effects of reform (e.g. compensation)
- Address **political economy concerns**

## Zambia: Fertilizer Subsidies and Reform

### ***Market failure identified (2009)***

- Fertilizer use below optimal levels

### ***Farmer Input Support Programme (2013- )***

- Targets: food security, smallholder income, and access to agricultural inputs
- Subsidizes 50-75% of input costs
- Scaled down over time

### ***Criticism and further improvements***

- Inequitable distribution
- E-vouchers → To reduce crowding-out
- Complementary inputs and management practices → Reduced pressure on fallow land

Sources: Xu, Guan, Jayne 2009, Mason, Jayne and Mofya-Mukuka 2013, Kato and Greely 2013.

## Upcoming report

### Reforming and repurposing agricultural support

---

- Joint report by UNEP-UNDP-FAO developed together with IFPRI, IMF and WHO.
- Aims to fill knowledge gaps on **costs and impacts of agricultural support** and convey key messages on opportunities from reforming and repurposing support for sustainable food systems.
- Focuses on **impacts on nature** (incl. land use and biodiversity); **climate change** (GHG emissions, land use change, adaptation); **nutrition** (incl. affordability of healthy diets), **human health** (incl. pollution exposure, risk of zoonotic diseases from land use change) and **equity** (incl. poverty, gender equality).
- Elaborate a Country Guidance Framework to provide **practical guidance to countries on 'how to' repurpose** support for sustainable food systems transformations and overcome challenges to reform.
- Plan to launch report by **Food Systems Summit 2021**.

# Resources

## For further reading

---

### Resources and websites:

[Global Recovery Observatory](#)

[Green Fiscal Policy Network website](#)

[UN Food Systems Summit - Action Track 3 Synthesis Report](#)

[PAGE - Partnership for action on Green Economy](#)

### eLibrary:

[GGKP eLibrary](#) includes several publications on fiscal instruments