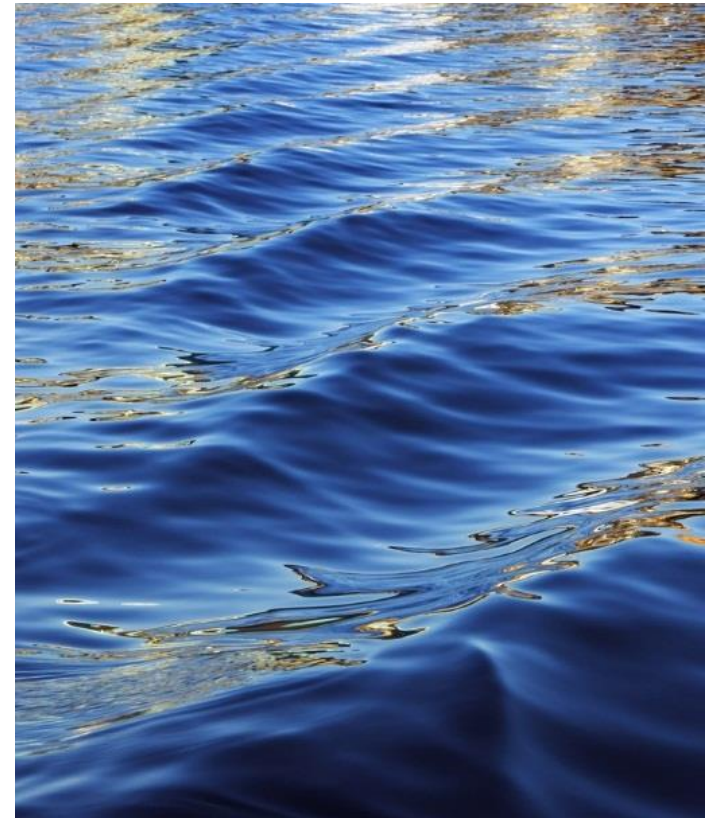


Agricultural subsidies and water

*Environmentally Harmful
Agriculture Subsidies: Fostering
International Trade Cooperation:
A Deep Dive Roundtable*

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Basic taxonomy of practices

		Impact of the practice			Rationale for the practice	
		Water quality	Water quantity	Input saving	Production/ productivity enhancing	Environmentally beneficial
Crops	Land retirement/ set asides	X	X			X
	Terraces	X			X	X
	Changes in crop rotations	X	X		X	X
	Artificial fertilizer use	X			X	
	Pesticide use	X			X	
	Conservation tillage	X				X
	Cover crops	X		X		X
	Conservation irrigation		X	X		X
Livestock	Confinement of animals (including aquaculture)	X	X	X	X	
	Pesticide (antibiotic) and hormone use	X		X	X	
	Pasturing of animals	X				X

Agri-chemical subsidies

Agri-chemical subsidies are often inefficient and exacerbate income disparities in the farm sector.

- Subsidy programs should focus on soil enhancing practices, incorporate careful consideration of distributional impacts in program design, and include clear exit strategies and robust monitoring and environmental compliance systems.
- In already intensive systems, policies move fertilizer and other agri-chemical prices to be close to their shadow prices, and other approaches should be used to reduce the environmental impact of agri-chemicals, from application bans in certain periods to applicator training and consistent large-scale monitoring.

Irrigation subsidies

Subsidies for efficient irrigation have proven to be prone to rebound effects.

- Rather than subsidizing the technology, in water scarce environments, programs should be set up for R&D to reduce water needs of crops, and to promote crop rotations and practices that reduce water demands. Care should be taken to consider unintended environmental and socioeconomic consequences of such programs.

Environmental subsidies

Policies focused on one specific environmental issue (eg GHG emissions) can have unintended consequences on other environmental indicators.

Similarly, policies that impact land use can have unintended consequences through spillage and rebound effects.

- *Ex ante* policy assessment should identify unintended consequences and funding should be concentrated on practices that limit them or are synergistic with other environmental goals. For example, first generation biofuel subsidies can have both negative impacts on water quality and cause rebound effects - thus negating GHG benefits.

Environmental subsidies

Policies allegedly implemented for environmental purposes are often structured to primarily provide income support, directly or indirectly.

- Program design should focus on targeting based on environmental goals to avoid inefficiencies and unintended consequences. For example, land set aside programs have often been devised to retire whole fields for short periods of time to bring prices up. More targeted permanent easements may be more effective in achieving environmental goals.

Livestock subsidies (including aquaculture)

Intensification of livestock production results in negative impacts on water quality and often indirectly on water quantity.

- Measures supporting livestock intensification should be accompanied by robust monitoring and environmental compliance policies, and should consider impacts on water quantity directly or via effects on animal feed.
- For countries which already have intensified agricultural systems, confined livestock production should not be subsidized and should be subject to point-source environmental monitoring and compliance efforts.

General conclusions

- For countries with existing subsidy systems that cause water quality and water quantity problems, and which already have intensive agricultural systems, there is abundant evidence that policies promoting dietary changes have to be implemented concurrently with subsidy reform.
- For all yield enhancing policies, there should be a conscious and continued effort to reduce the peak of the EKC and to decrease the pollution intensity of agriculture as soon as possible.
- It should be standard operating procedure to devote a portion of farm subsidy programs to monitoring efforts, including air + water quality and GHG emissions. These programs should be administered by science-based institutions and insulated from political pressures.