

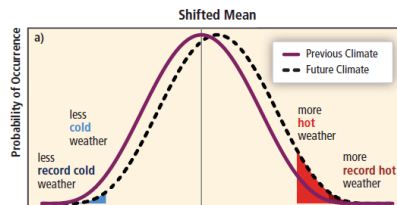
Agricultural Policy in Hot, Dry Summers Lessons from a Case Study of Ireland in 1976

David R. Stead

UCD School of Agriculture & Food Science



Effects of Simple Shift of Distribution Towards a Warmer Climate



Source: IPCC (2011)

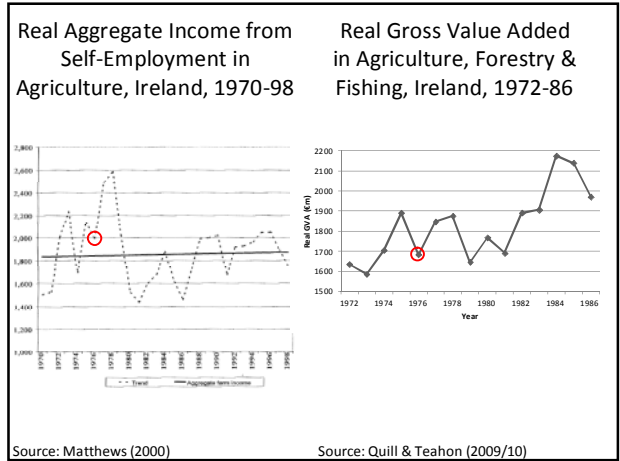
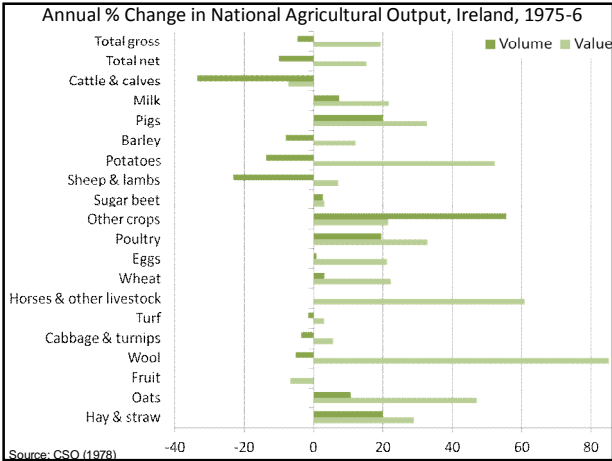
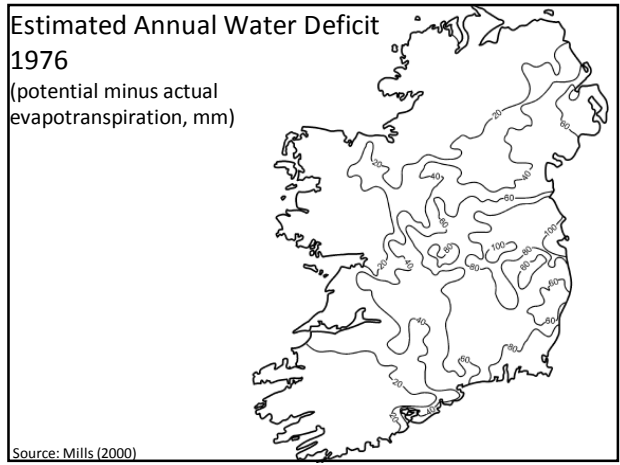
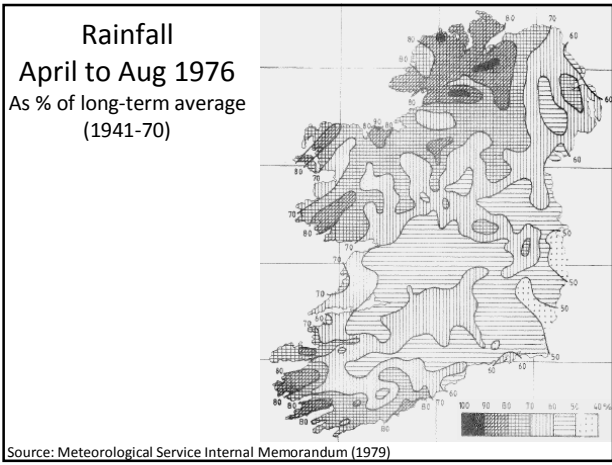
- Apparent outlook for the Republic of Ireland of an increased incidence of heat waves & possibly of dry summers (Irish Committee on Climate Change 2007; Desmond et al. 2009; Kiely et al. 2010)

Context

- Current national policy debates on
 - Water services (Brady & Gray 2010; Reeves 2011; Hogan 2011)
 - Management of severe weather events (Joint Committee on the Environment 2010; Hickey 2010; Tol 2011)
 - Risk management in farming (Matthews 2010; Tangermann 2011)
 - Food poverty (Dowler & O'Connor 2011; Maitre 2011)
- No previous extensive political economy study of Irish agriculture in 1976
 - Minimal coverage in Dooge (1985); Kiely et al. (2010); Sweeney (2010)
 - vs. Carter (1978); Morren (1980); Martin (2010b) for Britain
- Past experience helpful for effective risk management & adaptation policies (Martin 2010a; IPCC 2011)

Chronology

- Part of a longer, wider anomalous weather pattern (Morris & Ratcliffe 1976; Ratcliffe 1978)
- Oct 1974 to early Sept 1976
 - Ireland's 'dry period' (Meteorological Service Memorandum 1979)
- 29 June 1976
 - National 20th century record air temperature of 32.5°C at Boora, Co. Offaly
- c. 16 July to 7 Sept 1976
 - Main drought period (Meteorological Service Memorandum 1979; Mac Cárthaigh 1996)
- Mid-Aug 1976
 - Some water restrictions commenced (Irish Times 1976)



% Change in Crop Yields 1976 Relative to Preceding 3-Year Mean

	Ireland	Britain
Wheat	-6.6	-11.7
Oats	-5.5	-5.8
Malting barley	-14.8	n/a
Other barley	-11.2	n/a
Total barley	-11.7	-6.6
Potatoes	-7.8 ^a	-21.4 ^b
Sugar beet	+3.9	+4.6

Sources: *Irish Statistical Bulletin*, various years; Carter (1978)
Notes: ^a excluding 'diseased' potatoes; ^b main crop only

Some Estimated Impacts of Moisture Stress on Irish Farm Production, 1976

Yields from managed pasture in areas with 60mm annual water deficit	-10%
Yields from Golden Delicious apple trees, trickle irrigation trial, Co. Dublin	-28%

Sources: Mills (2000); Keane & Collins (2004)

Principal Agricultural Policy Responses

- Beef
 - Aid to private storage & increased export refunds
 - Irish private storage schemes May & July 1976
- Dairy
 - Sept 1976: EEC Regulation providing for sale of intervention skimmed milk powder
 - Outlet for 44,000 tonnes of Irish SMP
- Potatoes
 - 'Limited' imports permitted (as in 1975)
 - Export restrictions from late July 1976
 - Cross-border smuggling

Sources: Dept. of An Taoiseach files; Dept. of Agriculture (1977)

Some Policy Implications (1)

- Most vulnerable region reconfirmed
- No obvious major lessons for managing extreme weather events
- Adaptive action for possible future droughts not as high a priority for Ireland as elsewhere
 - Irish farming in 1976 one of least affected in EEC
 - Three worst-affected crops even less important in aggregate production value nowadays
 - Ability to benefit from more severe drought-induced production problems elsewhere
- Supports IPCC (2011) general recommendation for initial focus on low-regrets measures

Some Policy Implications (2)

- Reconsideration of agricultural risk management policy instruments
 - 1976 instruments now rolled back (intervention) and/or might be discontinued (export refunds & restrictions)
 - Counterfactuals using proposed CAP risk management 'toolkit' (European Commission 2011)
 - Probably no payouts by mutual funds under Article 40 income stabilisation tool
 - Some Article 38 production insurance payments almost certainly would have been triggered
- More attention required on impact of weather-induced food price inflation on poor consumers in Ireland & other developed countries

