

# Why agroecology should be at the heart of the Scotland's food and biodiversity policies

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# What is agroecology?



- A science, a practice and a social movement focused on sustainable food
- Bottom-up: not how can **we** feed the world (and make a profit) but how can populations feed themselves well while building natural and social capital?
- The whole system, not just production inputs/outputs but the ecosystem and social system in which these are embedded
- Underpins organics, permaculture, agroforestry, urban farming

# What would it look like?

- Less reliance on feed imports (118,000 ha soya) and on manufactured nitrogen
- More biology, less chemistry: circular economies of food
- More diversity of crops, habitats, farms and farmers
- More people on farms
- Higher nutrient densities (70% decline post war)
- Better integration of crops, trees and livestock
- More short supply chains, closer citizen-producer links
- More seasonality, less choice, less processing
- Maximum sustainable yield?

# It could look like..

**Scotland *The Bread***  
*building a home-grown grain*  
*economy*



# It could look like..

- Cuts green-house gas emissions by more than half
- Reduces energy use by more than half
- Cuts the use of antibiotics by 90%
- Cuts the use of agro-chemicals by 90%
- Doubles the productive life of cows
- Increases the farm biodiversity ten-fold
- Increases the net amount of food in our food system by 80%
- Takes much of the drudgery out of the stock-man's routine
- Exceeds the highest standards of animal welfare





It could look like..



It could look like..





Or like this..





Or even like this..



# But a bit less like this..



# Why now?

Because there's a mismatch..

- Between what goes on and changing public expectations
- Between what goes on and what natural systems can bear
- (Half of global wildlife gone in 40 years, continuing decline in farmland birds, nitrogen cycle overloaded, 100 harvests left)
- <http://www.theguardian.com/environment/2014/sep/29/earth-lost-50-wildlife-in-40-years-wwf>



50% down 1990 -2009





57% down 1970 -2012





Population halved in last ten years due to habitat destruction for palm oil

Now critically endangered in Borneo and Sumatra. Nice biscuits, nice ice cream





# 5%

Our research has found that only 5% of our fresh produce will not be affected by changes in the climate.

# How hard can it be?

Change what  
we eat

Change how  
we farm

Change the  
local food  
economy

Change  
public policy  
at all levels

# Barriers

- Commodification of land, nature and food
- Dominant productionist mindset – policy, research, training and extension services
- Externalities
- Subsidy system
- Access to land and markets
- Hourglass control of distribution and retail
- Industrial food culture



## But it's not all bad..

The figures in this table show the difference in gross margin (£/ha) between organic and equivalent non-organic farms over the last six years

Farm type	06/07	07/08	08/09	09/10	10/11	11/12	Six year mean
Cropped	£130	£44	£19	£118	-£4	-£150	£26.17
Mixed	£277	£135	£110	£70	£30	-£60	£96.67
Dairy	£271	£109	£1	£203	£7	£2	£98.83
Lowland Beef & Sheep	-£16	£80	£3	£51	£38	-£30	£28
LFA Beef & Sheep	£68	£150	£79	£51	£105	£0	£75.50
Group mean	£146	£103	£42.40	£98.60	£35.20	-£47.60	£63.03

# Fact – clean food



**ORGANIC  
FOOD  
IS FREE  
FROM  
PESTICIDES.**

Buy organic at Cream o'  
Rainton, Gatehouse of F  
Douglas, Kirkcudbrights



# Fact - Animal welfare



**ORGANIC  
CHICKENS  
ARE  
GENUINELY  
FREE  
RANGE.**

Buy organic at Connage  
Milton of Connage, Ardeer



# Fact - Jobs



**THERE  
ARE MORE  
JOBS ON  
ORGANIC  
FARMS.**

Buy organic at Knockfar  
Dingwall, Highland, IV15



# Fact - animal behaviour



**ORGANIC  
PIGS ARE  
FREE TO  
ROOT AND  
ROAM.**

Buy organic at Whitmuir  
Lamancha, West Linton,

# Fact - Clean water



**FROGS ON  
ORGANIC  
FARMS  
THRIVE IN  
CLEANER  
WATER.**

Buy organic at Greencity  
Fleming Street, Glasgow



# Fact - Biodiversity – above and below the ground



**ORGANIC  
FARMS ARE  
HOME TO  
MORE BUGS,  
BEASTIES,  
BIRDS AND  
BUTTERFLIES.**

Buy organic at Bread & Butter  
Lamancha, West Linton.

# Where to start

- Building a broad civil society consensus
- Connecting citizens and producers: change the world three times a day
- Social and financial innovations
- More new farmers, community land trusts
- SRDP – short supply chains, advisory services, co-operation, knowledge transfer, food processing and marketing
- Sustainable food cities – influence up and down
- Research and development



“The right to food is not a right to a minimum ration of calories, proteins and other specific nutrients, or a right to be fed. It is about being guaranteed the right to either feed oneself directly from productive land or other natural resources, or to purchase food (De Schutter, 2010).

The current mainstream of industrialised farming and food provision has failed to deliver this right.”