

Water, Land and Ecosystems: Progress and Future Implications



RESEARCH
PROGRAM ON
Water, Land and
Ecosystems



IN PARTNERSHIP WITH:



Finding solutions to new, complex and interconnected drivers of risk



**Rural - urban
food systems**



**Integrated water
solutions**



Water, Land &
Ecosystems



**Land and soil
restoration**



**Equity and
inclusivity**

Partnerships for taking research to impact

Academic

Uptake

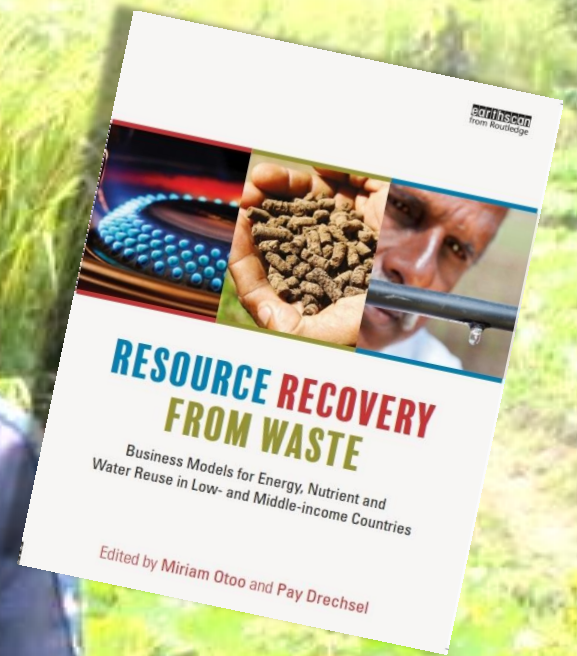


Scaling



Urban resilience and resource recovery and reuse

Meet George and guess which of his cabbages has been irrigated with wastewater



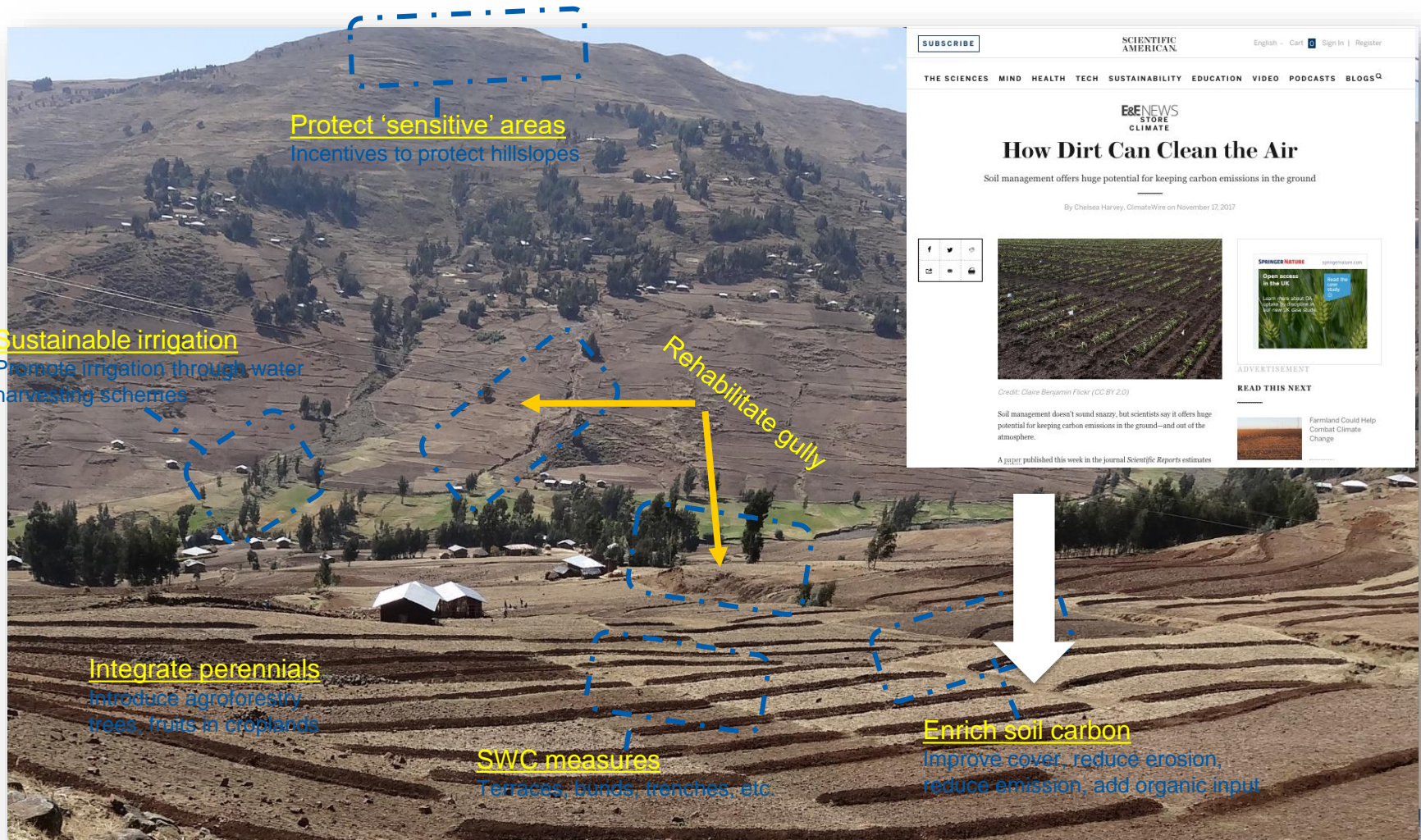
Small-scale water solutions for smallholder resilience

Here comes the sun!

- Solar irrigation is exploding
- Less CO2 emissions
- More food, health & hygiene
- Businesses sell tech, services
- Farmers get more reliable water & incomes
- WLE/IWMI pilots see tremendous potential in Africa & India



Land and soil restoration for sustainable food production



Protect 'sensitive' areas
Incentives to protect hillslopes

Sustainable irrigation
Promote irrigation through water harvesting schemes

Rehabilitate gully

Integrate perennials
Introduce agroforestry trees, fruits in croplands

SWC measures
Terraces, bunds, trenches, etc.

Enrich soil carbon
Improve cover, reduce erosion, reduce emission, add organic input

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How Dirt Can Clean the Air

Soil management offers huge potential for keeping carbon emissions in the ground

By Chelsea Harvey, ClimateWire on November 17, 2017

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Farmland Could Help Combat Climate Change

Credit: Clara Benjamin Flickr (CC BY 2.0)

Soil management doesn't sound snazzy, but scientists say it offers huge potential for keeping carbon emissions in the ground—and out of the atmosphere.

A paper published this week in the journal *Scientific Reports* estimates



Gender & inclusivity

- Awareness and recognition of differing needs
- Tools, institutions and technologies



A focus on urban food security – resilience and risk management

- Food systems analysis
- Planning tools



Feminization of agriculture



Enhancing private sector partnerships

- Business cases for land restoration
- Social enterprise: Innovation solutions for Decision Agriculture
- Waste-based soil rehabilitation applications
- Insurance and gender

Decision support for managing risks, trade offs and nexus

2018-2019 Priorities