



**Met Office**  
**Hadley Centre**



CLINTON DEVON ESTATES



UNIVERSITY OF LEEDS



# Land management tool for winter cover crops

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**With special thanks to the following:**

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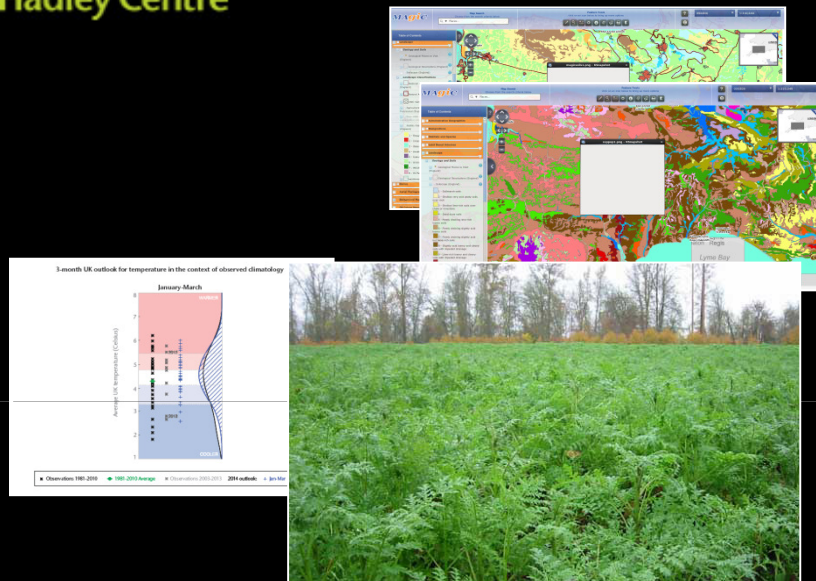
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*EUPORIAS General Assembly*

*Meteo-France, Toulouse, 20-22 October 2014*

# Land management tool concept

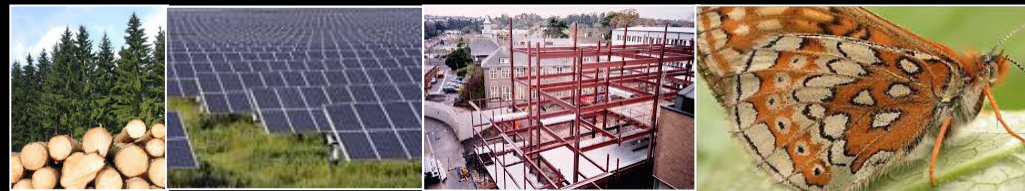
1. Locally tailored decision support  
for one decision (cover crops)



2. Broader range of  
agricultural decisions



3. Extension to other land  
management sectors



4. General tool for  
management of farms and  
large rural estates

# Why winter cover crops?

Building on improved skill in Monthly to Seasonal Forecasts

## Recent cold snap: March 2013

DfT notified on 4<sup>th</sup> January:

*“...there is now **an increasing risk of cold conditions** returning later in January and **an increased chance of wintry conditions** starting later this month...”*

Forecasts to UK Cabinet Office in Jan/Feb 2013:

*For **February below-average UK-mean temperatures** are more likely than above-average*

*For **March below-average UK-mean temperatures** are more likely than above-average.*



“Heathrow cancels flights and transport is delayed by snow”, BBC, 19 Jan 2013.



“Thousands of sheep and new-born lambs have died in the recent cold spell, according to the National Farmers' Union”, BBC, April 2013.

# How will better winter weather forecasts support farmers?

- Make **better decisions on cover crops** and therefore help to:
- Justify the **additional expenditure** involved (seed, fuel, labour),
- **Avoid loss of soil**
  - Prevent potential negative impacts on the environment and communities with nutrient leaching and soil on roads
- **Policy, managing and protecting soils**
  - Key cross compliance of the Common Agriculture Policy (CAP)
  - Forthcoming revised CAP will likely consider cover cropping as a Greening Option.





# Land management tool

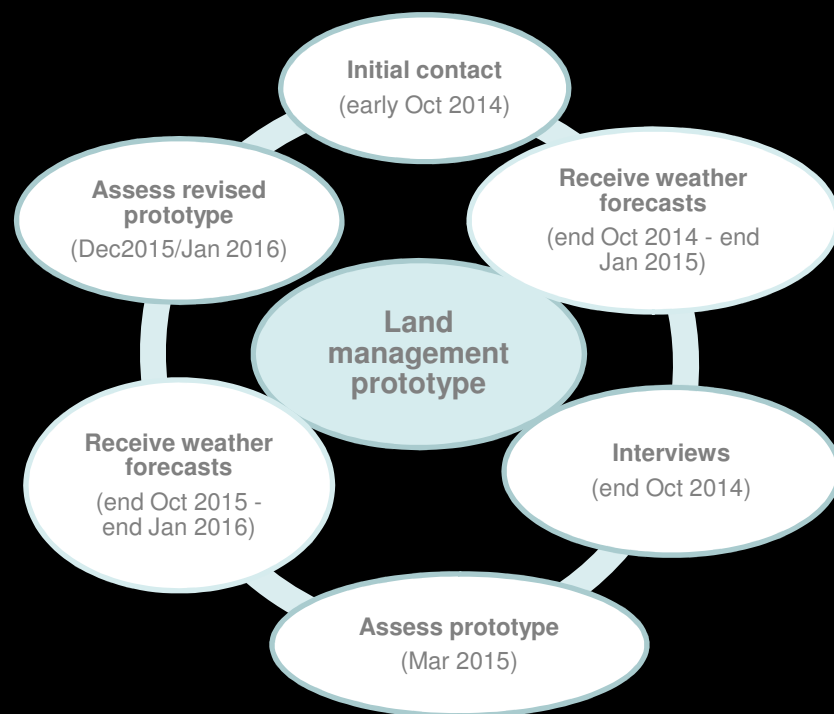
## Progress so far..

- Project plan, timeline and communications plan agreed
- Fortnightly partners teleconferences; weekly forecast development meetings
- Wikidot website setup
- Agreed initial set of farmers to work with
- Farmer interview/survey protocols drafted
- Information sheets sent out to subset of farmers
- Initial forecast technique agreed

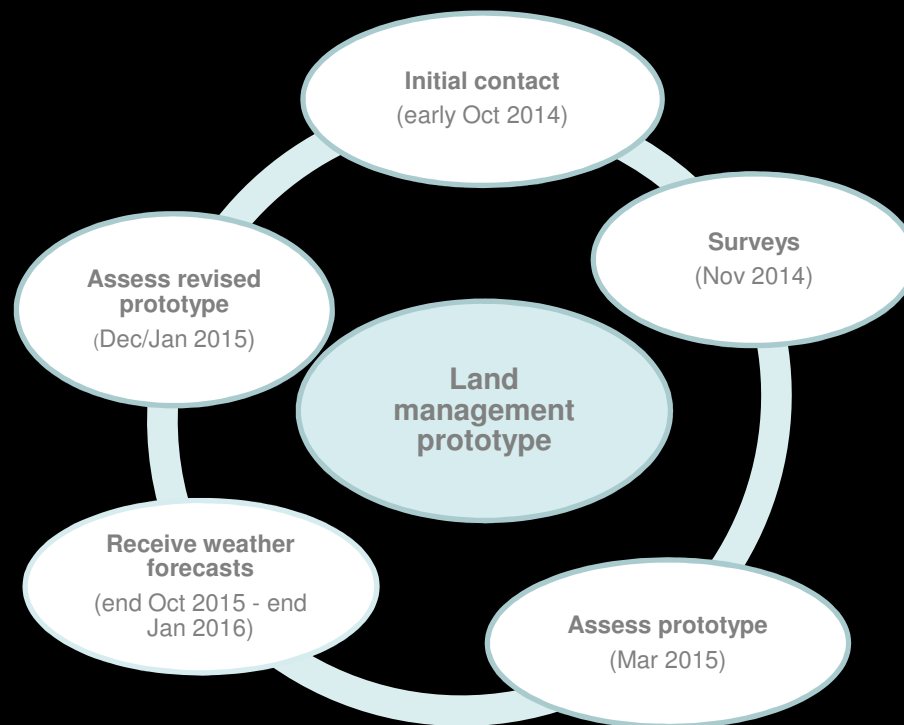
# Land management tool

## Stakeholder pathways

### Representative subset (4)



### All CDE farmers (32)

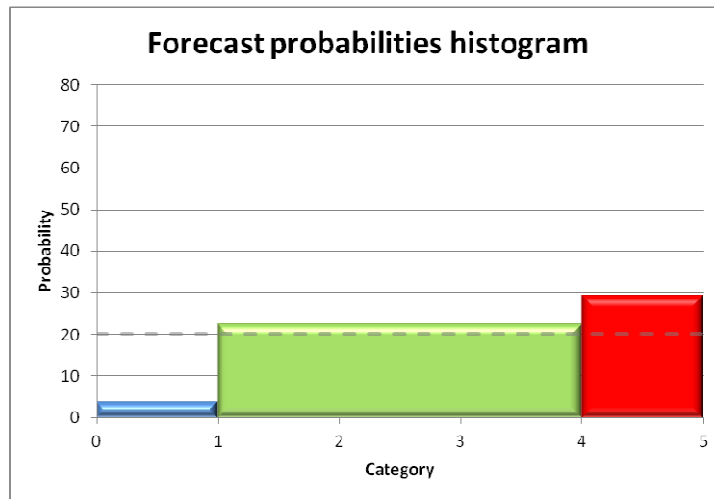


# Land management tool - mockups

## Forecast template

### Winter forecast: Nov-Jan

- How to use the forecast
- Forecast text



- Feedback section

## Exploring channels and content



# Land management tool in the news

## ARABLE FARMING

**Farmers  
Guardian**  
AGRICULTURE'S NATIONAL NEWSPAPER

Dr Pete Falloon, manager of the Climate Impacts Modelling Group at the Met Office, said the Met Office was trying to make it easier for land managers to make more weather-resilient decisions.

Dr Falloon said the Met Office was working with Clinton Devon Estates – a major South West landowner with responsibility for 25,000 hectares (61,700 acres) of land covering farming, forestry, conservation management and construction – through the European Commission-led Euporias project.

The aim is to develop a specific working tool for one application – in this case cover crop planting – and then extend it to other uses. Advance knowledge, for example, of a very wet winter would enable the farm manager to choose an appropriate summer/autumn-sown cover crop to protect soils which would otherwise be left bare and susceptible to run-off and erosion.







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# Plans for the coming year..

- **Winter 2014**

- Farmer surveys/interviews
- Initial rolling monthly forecasts for subset
- Initial press release

- **Spring/Summer 2015**

- Analyse interviews
- Assess forecasts with farmers
- Develop final forecast
- Mid-project press release

- **Winter 2015**

- Send out final prototype forecasts
- Assess forecasts with farmers
- Final press release
- Involve wider farming community?