



Department
for Environment
Food & Rural Affairs

UK Update – GRA Croplands Meeting 2015 – Brasilia

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on behalf of Dr. Luke Spadavecchia

GHG R&D Platform
Sustainable Intensification Platform
Other Activities



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Agricultural Greenhouse Gas R&D Platform

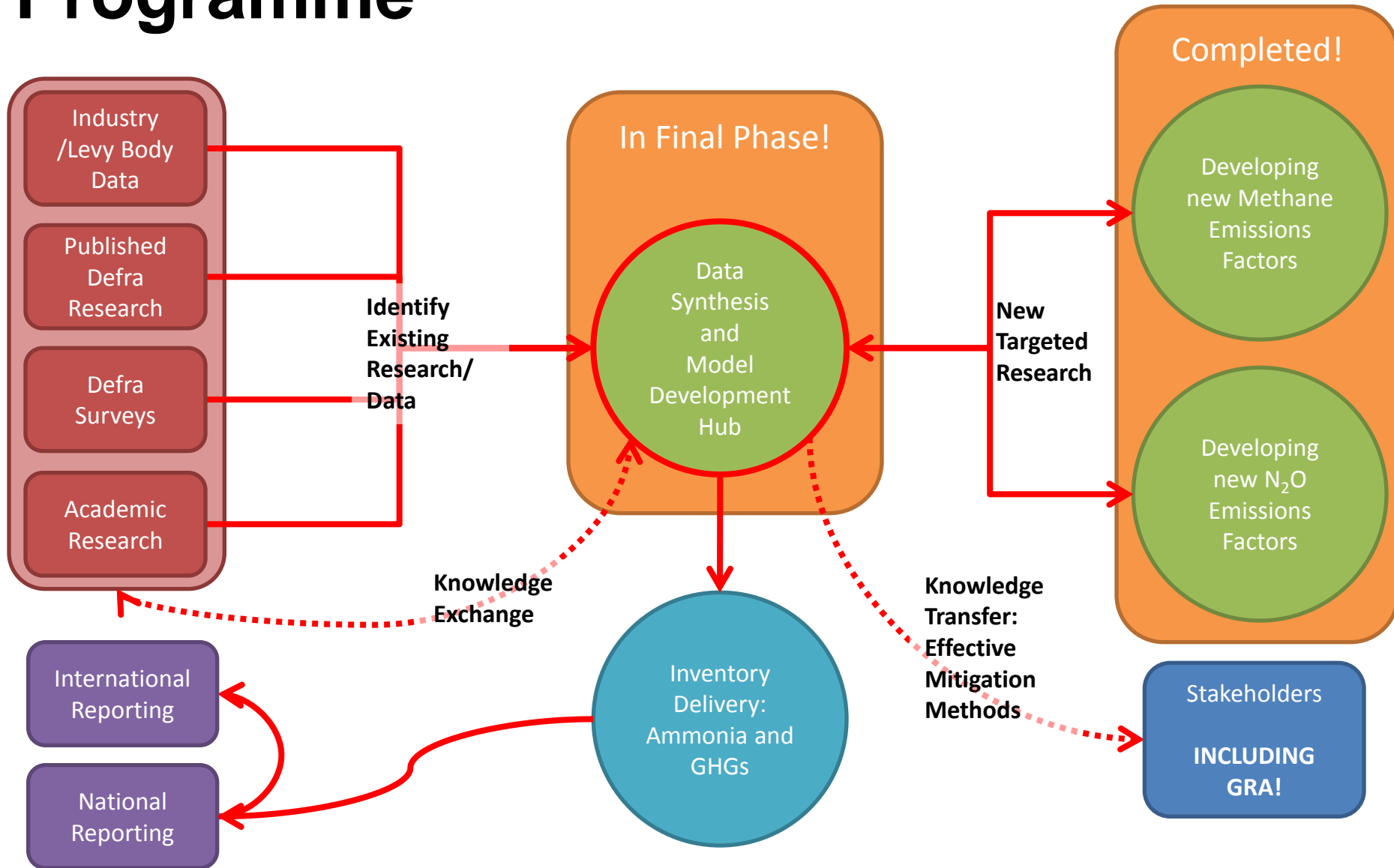
Scope: to develop a SMART inventory for the agricultural sector that is representative of UK soils, climate and management systems. The SMART inventory will explicitly capture the impact of on farm mitigation measures that enhance the efficiency of production.

The SMART inventory will be operational in 2017.

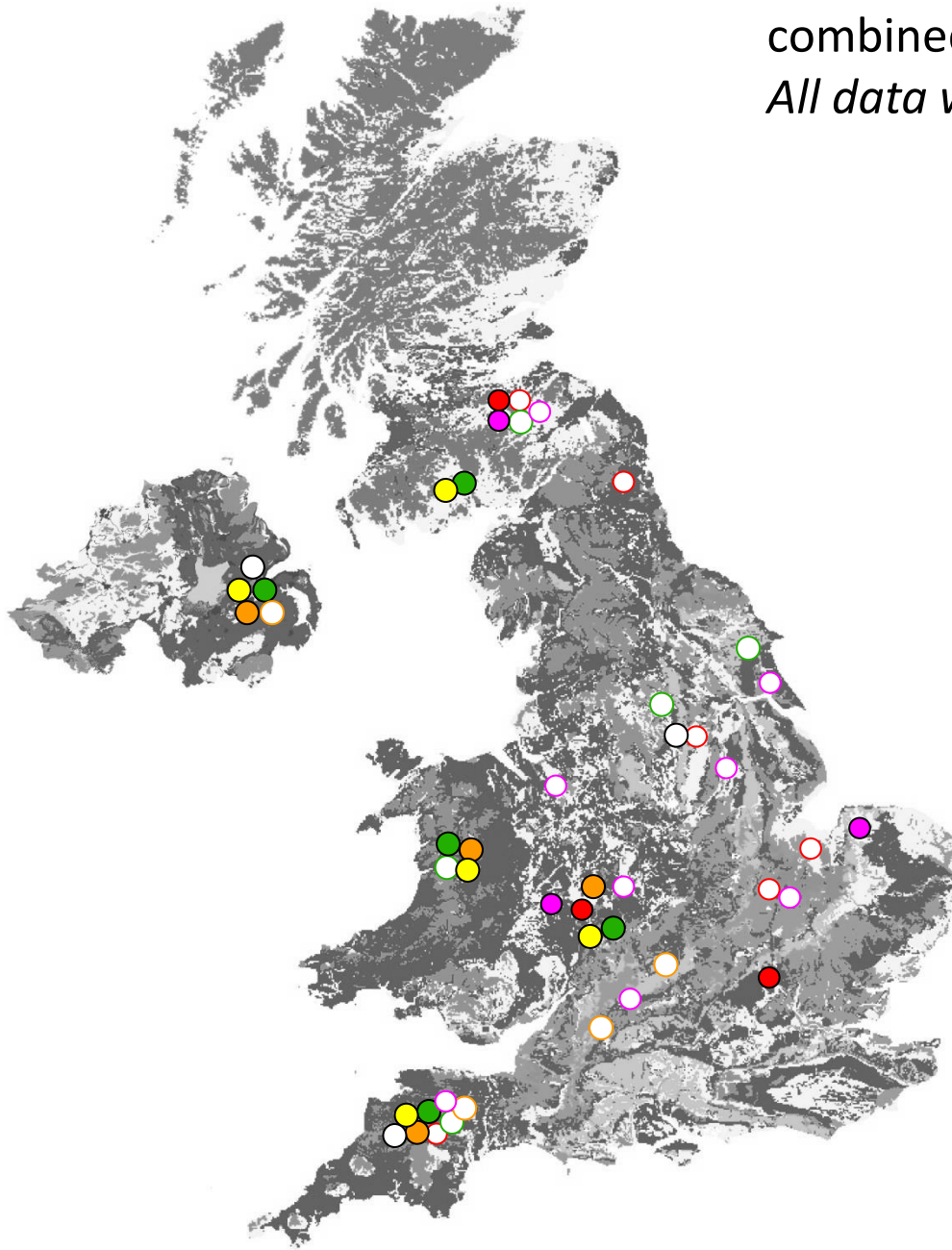
>16 collaborating organisations

£13M investment over 5 years

Inventory Improvement Programme



Now Almost 100 site years of data in UK
combined data set (old and new experiments):
All data will be publicly available!



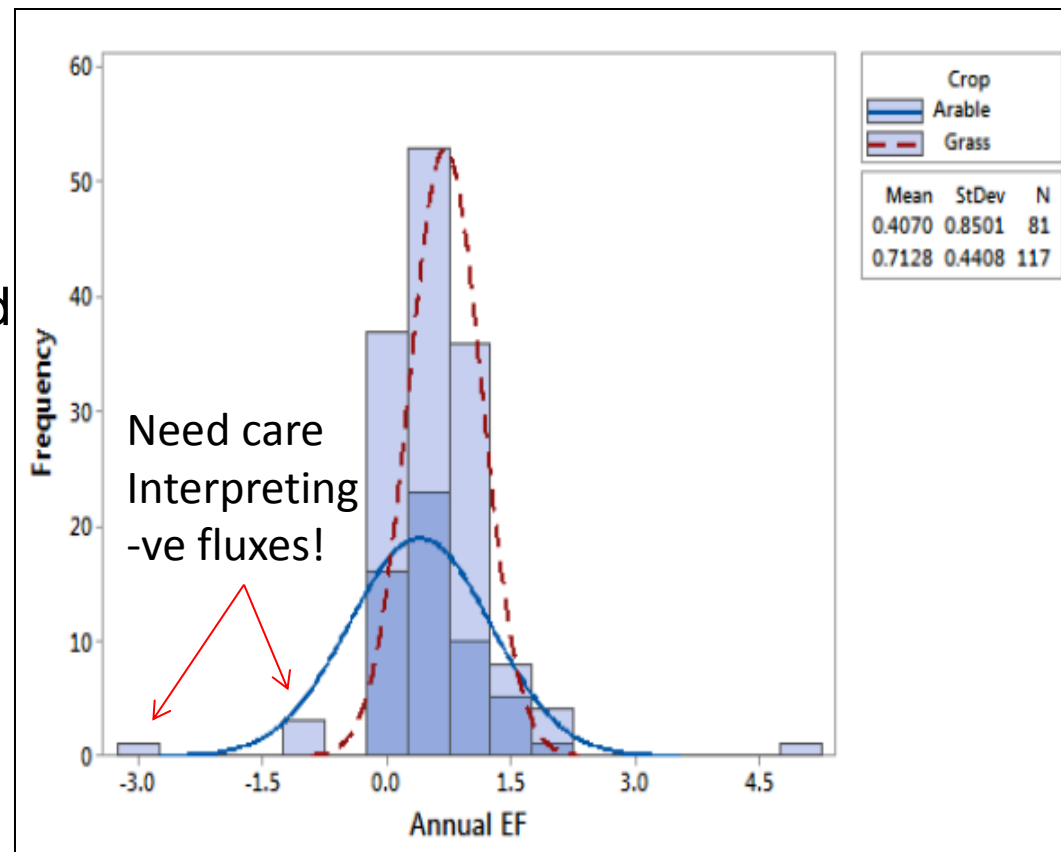
- New fertiliser to tillage site
- Existing fertiliser to tillage site
- New fertiliser to grass site
- Existing fertiliser to grass site
- New manure to tillage site
- Existing manure to tillage site
- New manure to grass site
- Existing manure to grass site
- New urine/dung to grass site
- Existing urine/dung to grass site

Cross Compliance Soils

- Chalk and limestone
- Heavy
- Medium
- Peaty
- Sandy and light

Indicative N₂O Results

- Results indicate that the IPCC default EF of 1% for N₂O from synthetic fertiliser applied to soils is too high for UK croplands, but is perhaps more reasonable for grasslands
 - Mean for crops = 0.4%
 - Mean for grass = 0.7%
 - Work on grazing returns is ongoing. We have separate EFs for dung and urine but need careful checking – combined EF is 0.52% << IPCC default!
 - **All EFs are draft and subject to change!**





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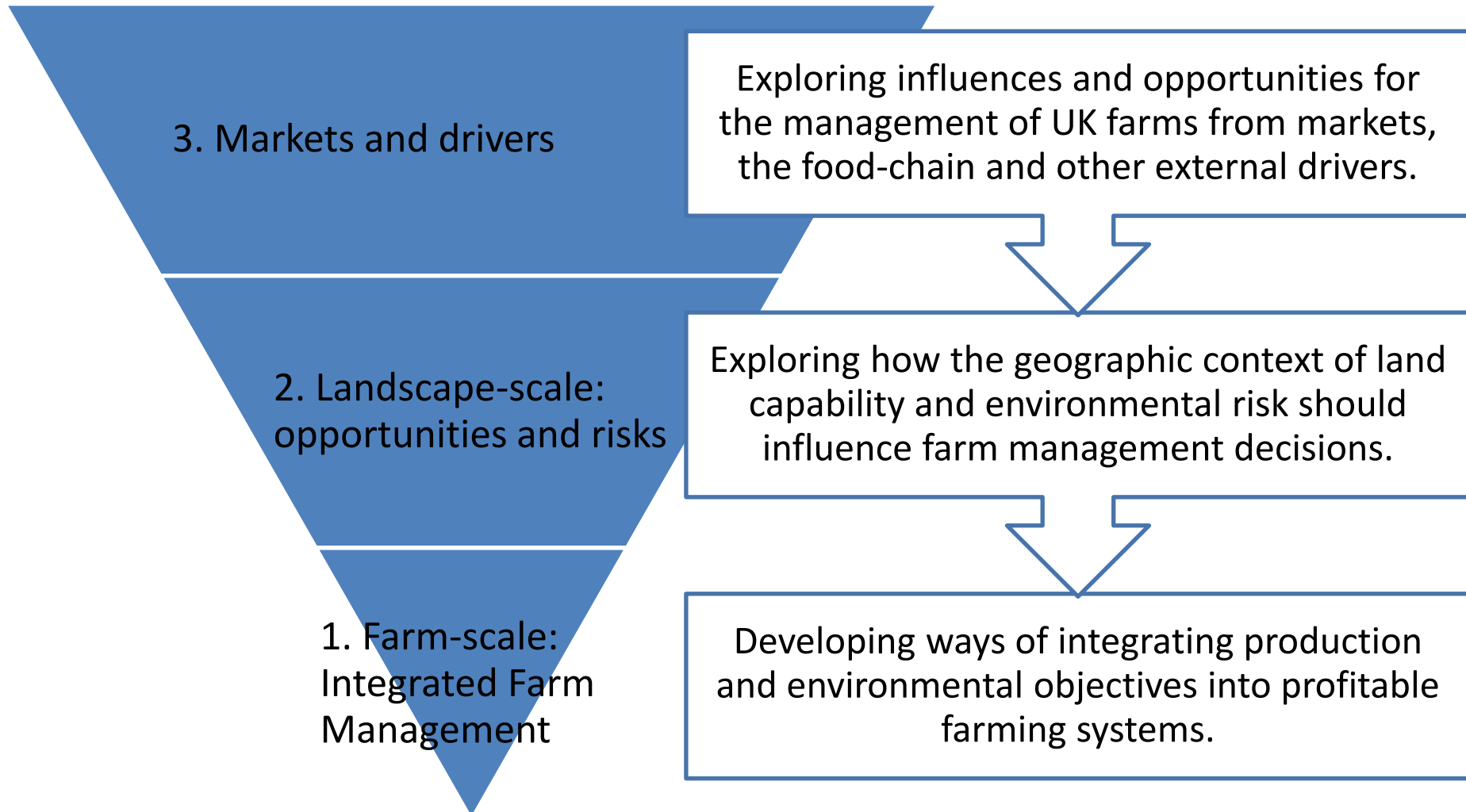
Sustainable Intensification Research Platform

Scope: to develop ways of increasing the productivity and profitability of UK agriculture while reducing environmental impacts, enhancing biodiversity and delivering wider ecosystem services.

>30 collaborating organisations

£4.2M investment over 3 years

Sustainable Intensification Platform research themes



SI Platform – key focus areas

	Understanding the system	Designing interventions	Socio-economic context
1. Integrated farm management	<i>Metrics/indicators</i>	<i>Integrated Farm Management practices</i>	<i>Decision support</i>
2. Landscape-scale opportunities and risks	<i>Land typology (capability and risk)</i>	<i>Landscape scale interventions</i>	<i>Collaborative land management</i>
3. Markets and drivers	<i>Resilience of UK farming</i>	<i>Income streams</i>	<i>Spheres of influence</i>

For more information contact Steve.Aston@Defra.gsi.gov.uk!



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Other UK Activities

- **MAGGnet:** UK ready to submit update based on new publications from platform. MAGGnet now also linked with GRAMP.
- **GRAMP:** Website now fully launched – update on progress to come later! We invite GRA countries to register, submit info & new models and to participate in webinars! *Need to consider contributions to site maintenance from GRA partners.*
- **Peatlands:** UK now has 3 years of good experimental data from managed agricultural peatlands and peatland restoration methods.
- **Peatlands:** The UK is submitting a bid to LIFE (£10 M IP integrated project). This is not an experimental project but looks at mechanisms for best practice. *Actual submission will be next year.* Interested in how we can interact.
- **Maximising opportunities to collaborate under EU Horizon 2020**, in particular UK is participating in the ERAGAS “Greenhouse Gasses from Agriculture and Silviculture” ERAnet.