




FLEX BASED TIMBER FORECAST APPLICATION

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Objectives

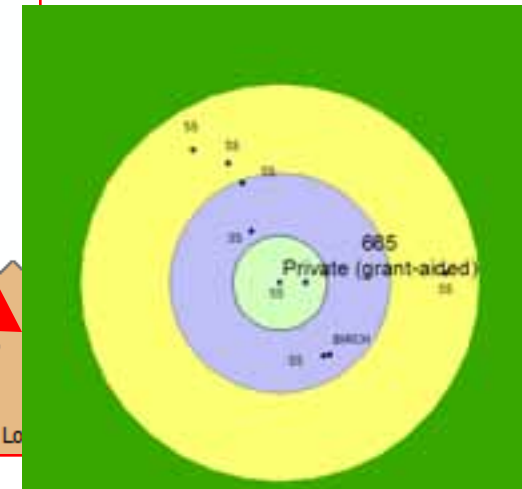
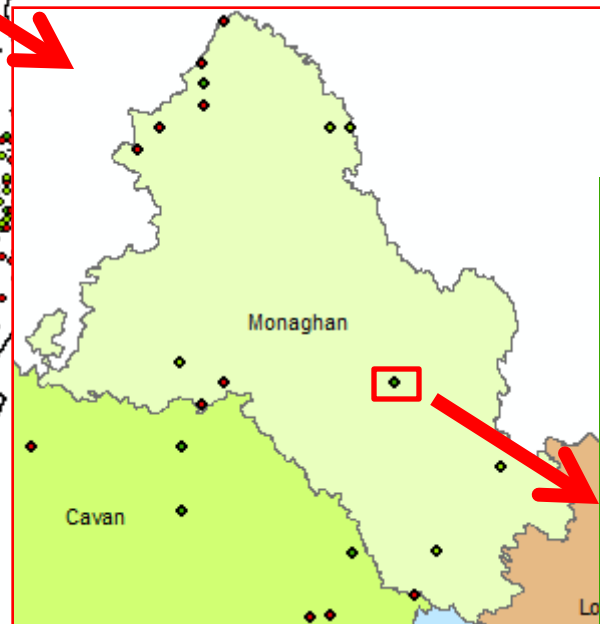
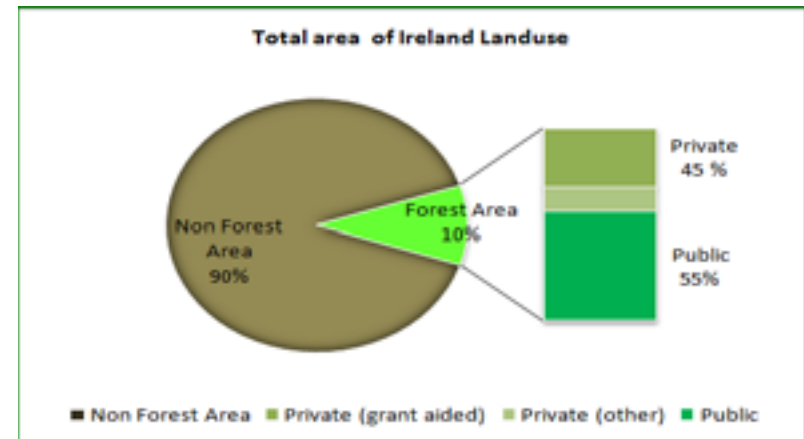
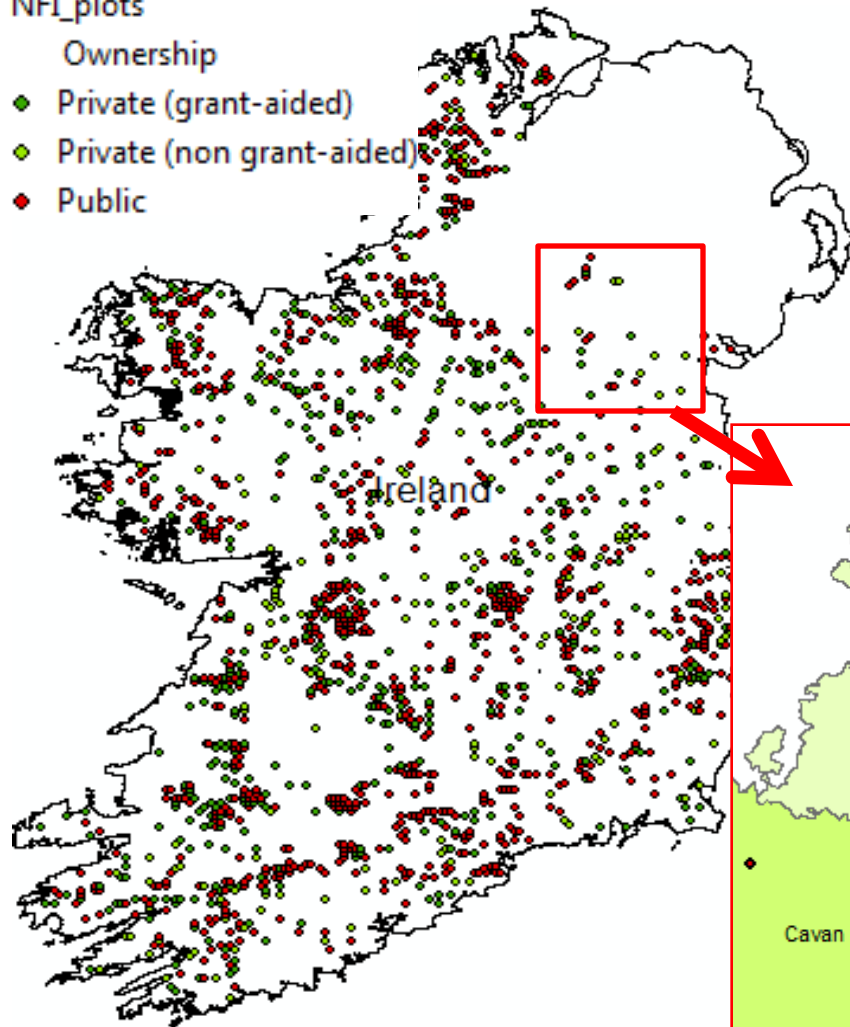
- Develop a web Application which integrates:
private sector inventory and management data, forest growth and yield parameter databases and environmental spatial constraints
 - Web Application generates:
real-time reliable forest inventory estimates and 25 year timber supply forecasts at all spatial scales through an interactive web based interface and is designed to provide database security and access to forest owners.
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National forest inventory plot distribution

NFI_plots


Ownership

- ◆ Private (grant-aided)
- ◆ Private (non grant-aided)
- ◆ Public






FORECAST Program

- Analyses NFI plot data and private sector data and produces forest inventory and forecast estimates on the fly
 - Computes subplot, plot, species, sub-compartment, stratum and stratified estimates and associated 95% confidence intervals.
 - Computes mean dbh, mean basal area, mean volume and associated 95% confidence intervals to produce reliable forest inventory estimates.
 - Computes stand level forecast estimates for top height, cumulative volume production $\text{m}^3 \text{ha}^{-1}$, average growing stock $\text{m}^3 \text{ha}^{-1}$, thinning and clearfell volume $\text{m}^3 \text{ha}^{-1}$ and volume assortments for 25 years with and without geospatial reduction factors.
 - The forest inventory and forecast estimates are exported to a zip folder, where they can be saved by the user within the Flex application.
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ArcGIS Viewer for Flex web application for forest inventory and timber supply forecasting



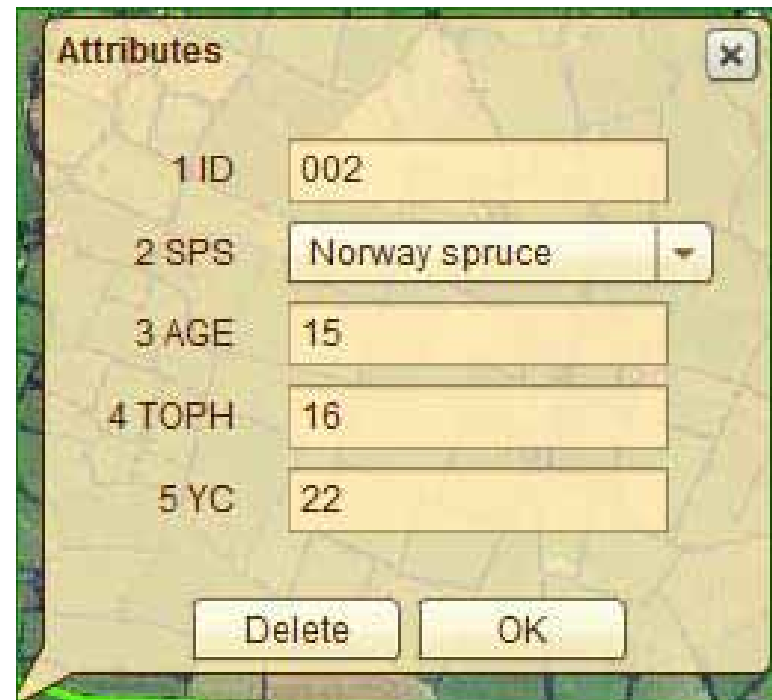
Forest inventory widgets for real-time estimation of mean volume (m^3) and or general yield class ($\text{m}^3\text{ha}^{-1}\text{a}^{-1}$)



Attributes

1 ID	1
2 SPS	Scots pine
3 MD1	14
4 MH1	10.8
5 MD2	13
6 MH2	10.4
7 VOL1	0.08069621
8 VOL2	0.06574489

Delete OK

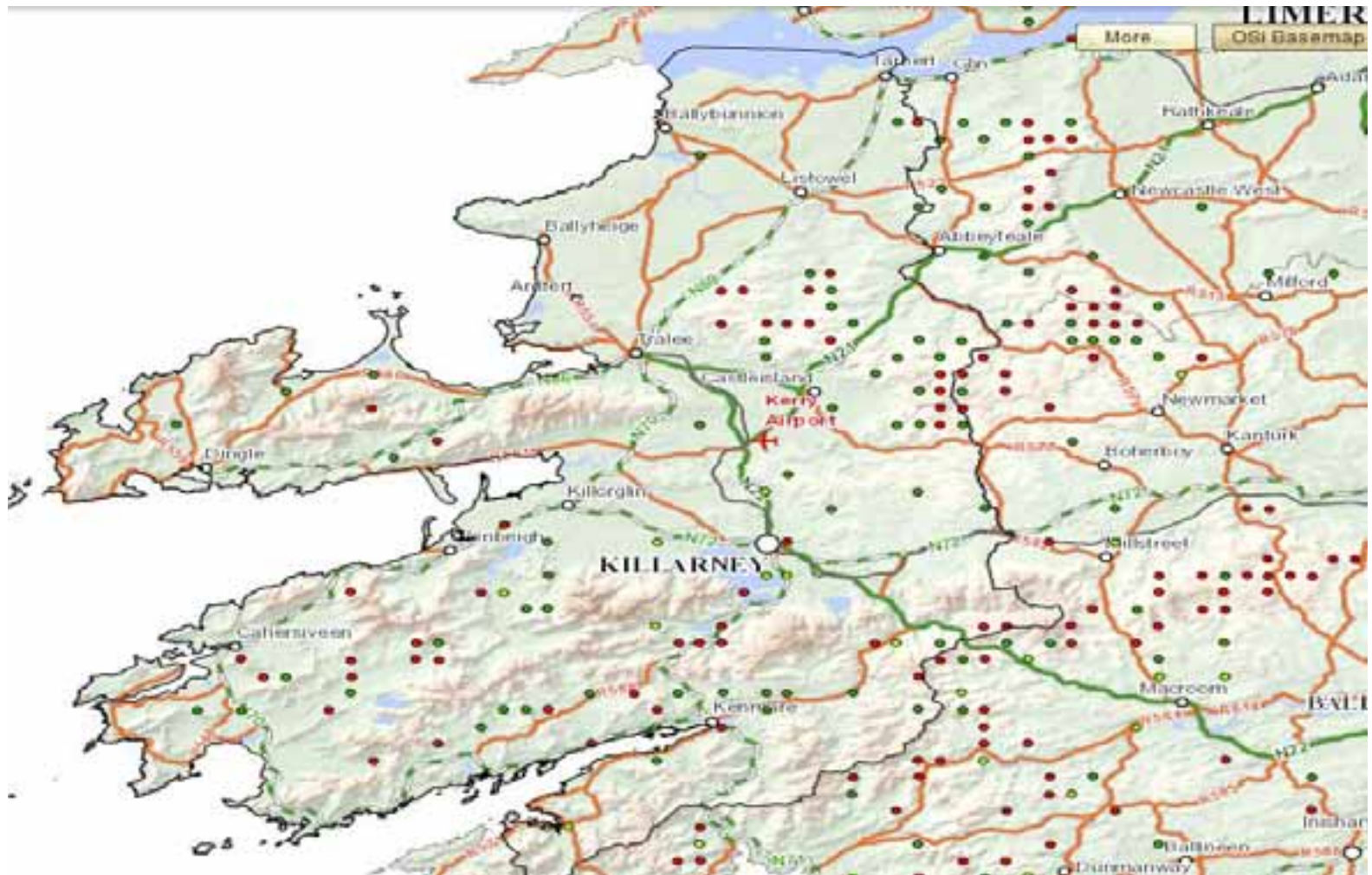


Attributes

1 ID	002
2 SPS	Norway spruce
3 AGE	15
4 TOPH	16
5 YC	22

Delete OK

Location of NFI sampling units in Kerry



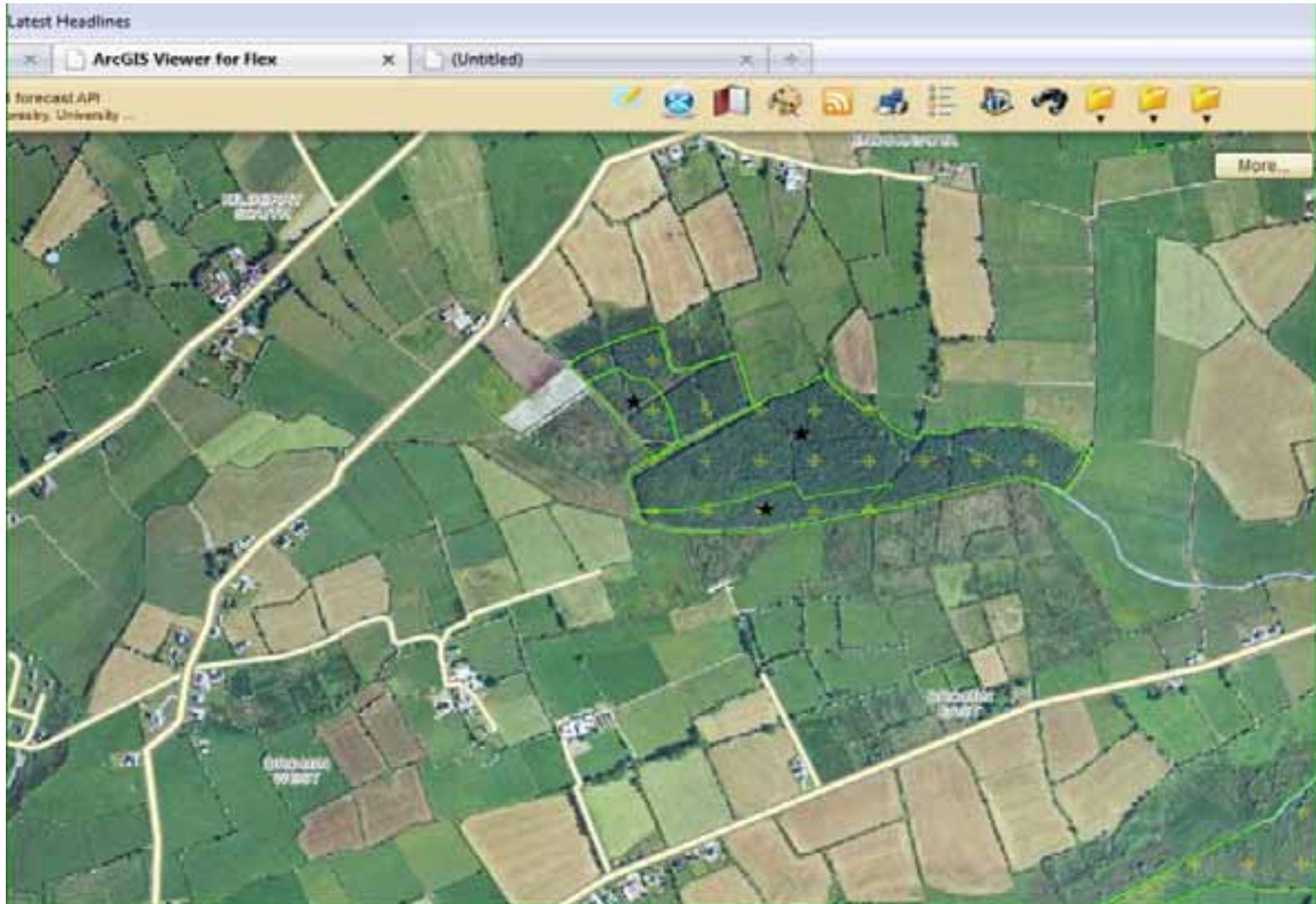
Forest inventory - management data interface



	Thin	Line	Cycle	MII	ROTN	RED_FAC	Access	Standing	€ pulp	€ pallet	€ sawlog	ROI	County	Widow	
1 MANGT	1	1	4	0.7	1	1	1	1	5	15	45	0.05	Ownership	Private	1
2 INPUT													Stratum	Small pole	5
3													Quality	High	1
4 Forester	O_Malley								TD_em	TD_em	TD_em		Straightness	Straight	1
5 YR_S	2012								7	14	20		Branches	Fine	1
6 SCID	1003								7	14	20		Slope of site	Level	1
7 SC_ha	0.63												Extract by	Forwarder	1
8 S_STR	5								L m	L m	L m		Impediments	None	1
9 n_SUx_SC	4								3.1	3.1	3.1		Models	Forestry Col	1
10 SU_n	1		2		2		2		3.1	3.1	3.1		Assortments	Collte_SS	1
11 E_m	325850		325900		325900		325900						Stratify by	Age classes	1
12 N_m	199450		199450		199450		199450						Constraints	All	1
13 SC_ha	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04					NPV based on	Prices suppl	1
14 Slope	0		22		22		22						Species 1	SS	4
15 SPS_SU	SS	LP	SS	LP	SS	LP	SS	LP					Species 2	LP	3
16 n_SPS_SU	2	2	2	2	2	2	2	2	2	2	2	2			



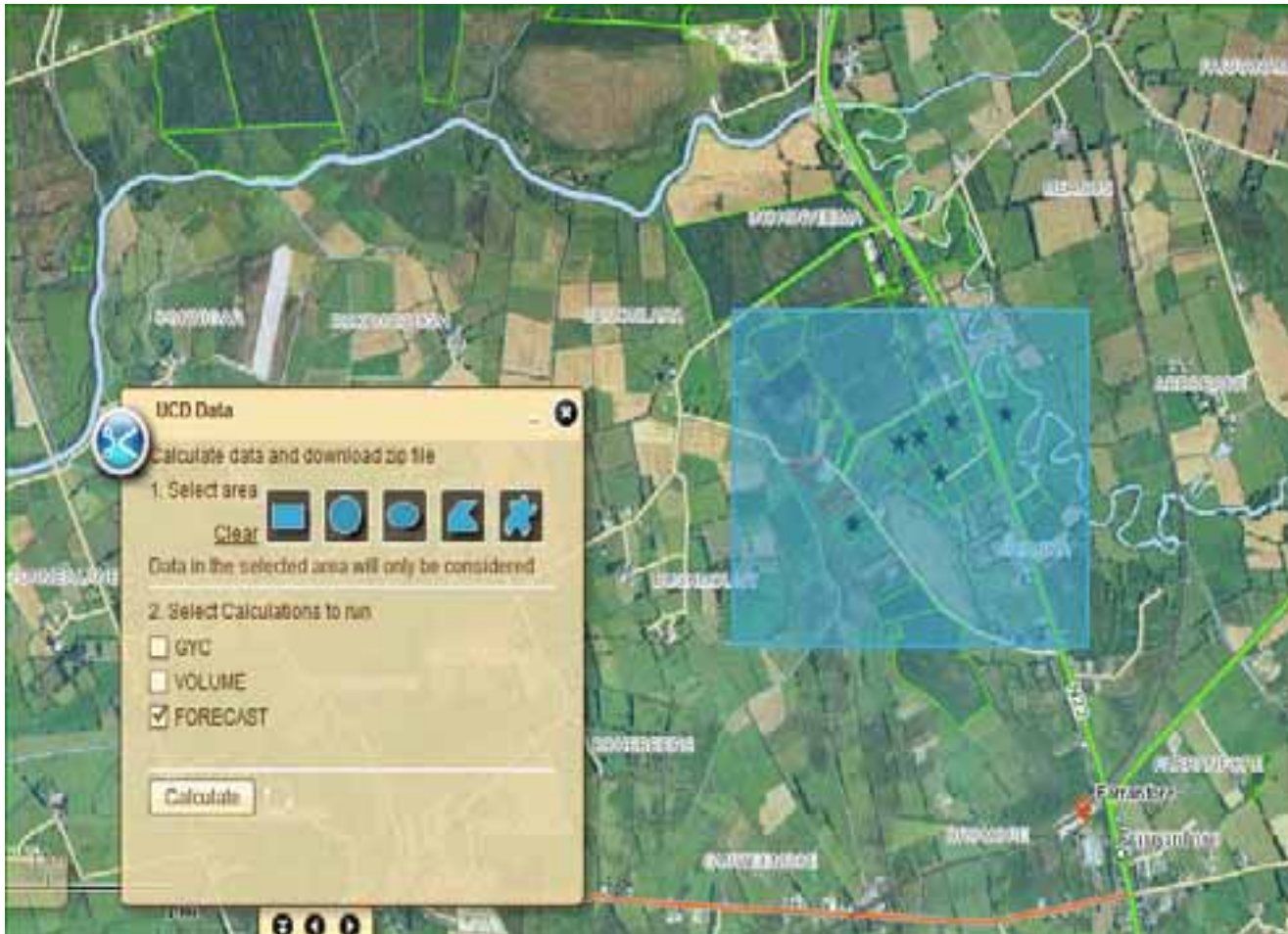
Location of potential sampling units for private sector



















Online submission of forest inventory - management data



Interactive data NFI and private data extraction and analysis



Forest inventory estimates and 25 year forecasts

Name	Date modified
 001_SP_Estimates.csv	12/06/2012 06:32
 002_SU_Estimates.csv	12/06/2012 06:32
 003_SC_Estimates.csv	12/06/2012 06:32
 004_Stratified_Estimates.csv	12/06/2012 06:32
 004_Stratified_Estimates_Combined.csv	12/06/2012 06:57
 004_Stratified_Estimates_Combined.xlsx	12/06/2012 07:00
 005_SC_Forecasts_ha.csv	12/06/2012 06:32
 006_SC_Forecasts.csv	12/06/2012 06:32
 007_SC_Forecasts_Red_Fac.csv	12/06/2012 06:32
 008_SC_Predicted_TOPHs.csv	12/06/2012 06:32
 009_SC_Predicted_AGS_ha.csv	12/06/2012 06:32
 010_SC_Predicted_CVP_ha.csv	12/06/2012 06:32
 011_SC_Predicted_TDC_gt3m_gt20cm_vol.csv	12/06/2012 06:32
 012_SC_Predicted_TDC_gt3m_14_20cm_vol.csv	12/06/2012 06:32
 013_SC_Predicted_TDC_gt3m_07_14cm_vol.csv	12/06/2012 06:32
 014_SC_Predicted_Present_Value.csv	12/06/2012 06:32

Results from FORECAST program embedded within Flex

Name	Date modified	Type	Size
001_SP_Estimates.csv	18/04/2012 09:16	Microsoft Office E...	9 KB
002_SU_Estimates.csv	18/04/2012 10:34	Microsoft Office E...	
003_SC_Estimates.csv	18/04/2012 10:34	Microsoft Office E...	
004_Stratified_Estimates.csv	18/04/2012 09:16	Microsoft Office E...	
005_SC_Forecasts_ha.csv	18/04/2012 09:16	Microsoft Office E...	
006_SC_Forecasts.csv	18/04/2012 09:16	Microsoft Office E...	
007_SC_Forecasts_Red_Fac.csv	18/04/2012 09:16	Microsoft Office E...	
008_SC_Predicted_TOPHs.csv	18/04/2012 09:16	Microsoft Office E...	
009_SC_Predicted_AGS_ha.csv	18/04/2012 09:16	Microsoft Office E...	8 KB
010_SC_Predicted_CVP_ha.csv	18/04/2012 09:16	Microsoft Office E...	5 KB
011_SC_Predicted_TDC_gt3m_gt20cm_vol.csv	18/04/2012 09:16	Microsoft Office E...	
012_SC_Predicted_TDC_gt3m_14_20cm_vol.csv	18/04/2012 09:16	Microsoft Office E...	
013_SC_Predicted_TDC_gt3m_07_14cm_vol.csv	18/04/2012 09:16	Microsoft Office E...	
014_SC_Predicted Present Value.csv	18/04/2012 09:16	Microsoft Office E...	
015_SC_Stratum_volume_mean.csv	18/04/2012 09:16	Microsoft Office E...	
016_Total_Volume.csv	18/04/2012 09:16	Microsoft Office E...	
result.txt	18/04/2012 10:34	TXT File	

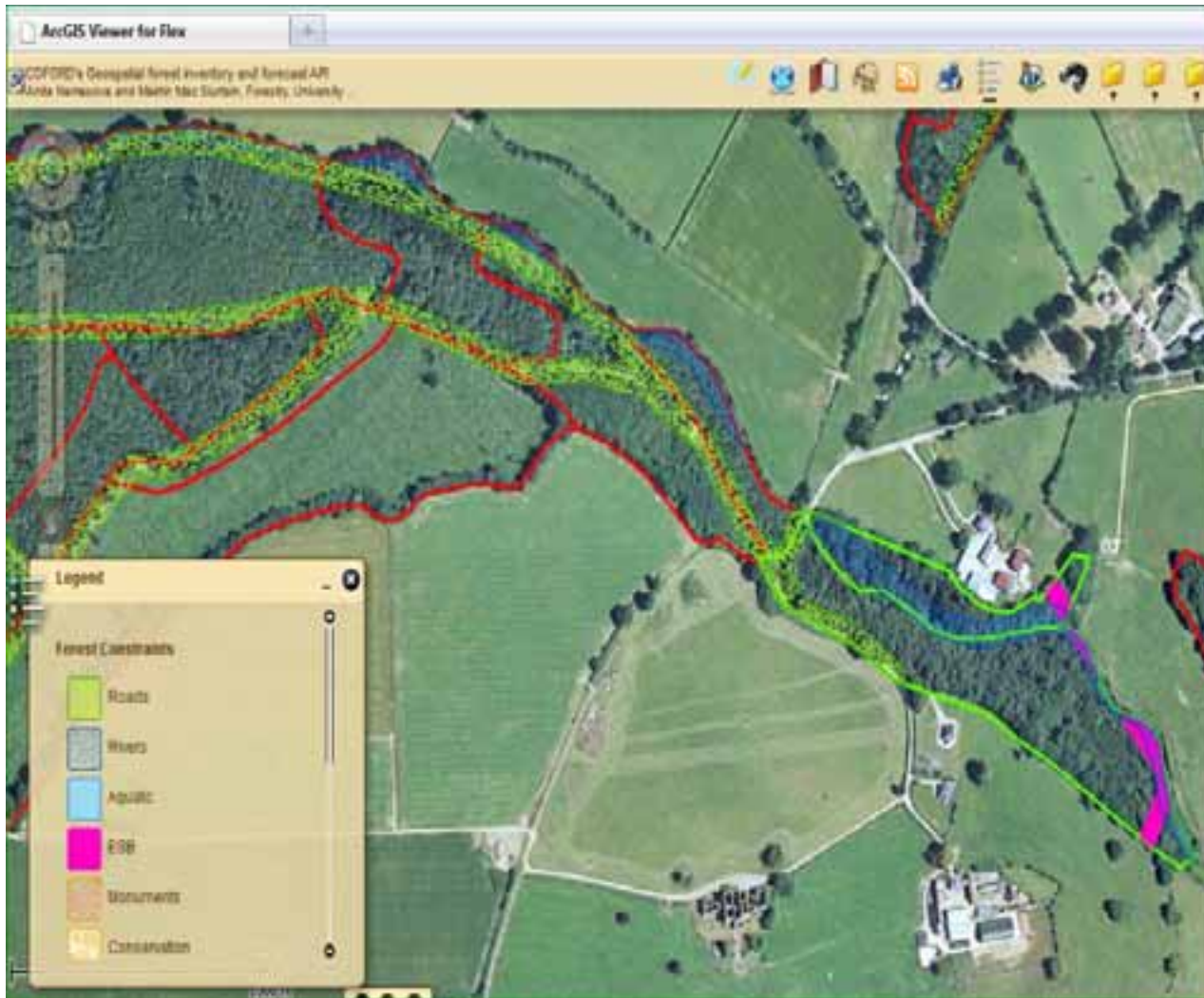
**Forest Inventory
2012**

**Forecast Estimates
2012-37**

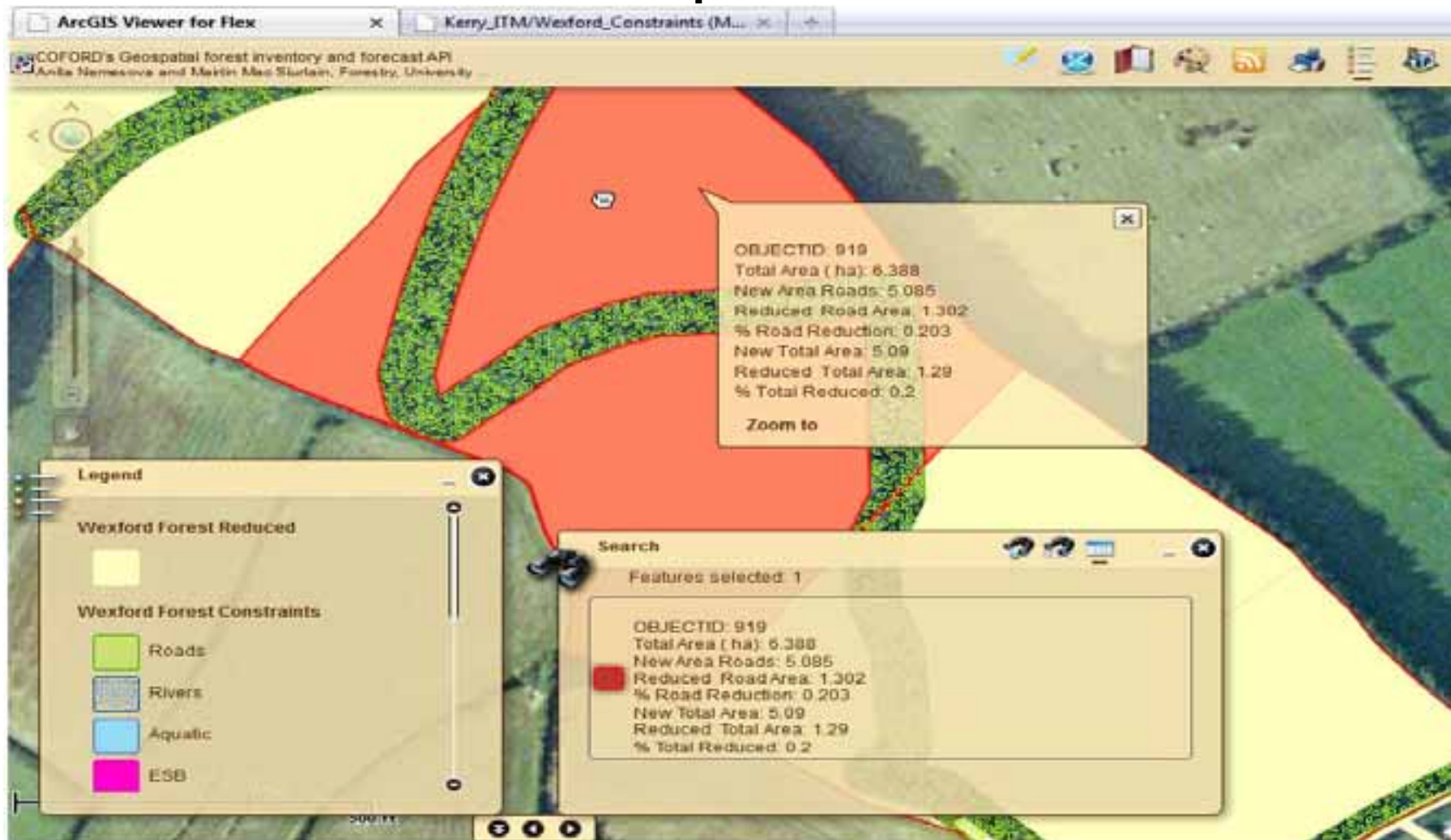
**Forecast Assortments
2012-37**

**Forecast Present Value
2012-37**

Quantify environmental spatial constraints



Environmental spatial constraints



THANK YOU
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