FLEX BASED TIMBER FORECAST APPLICATION

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Objectives

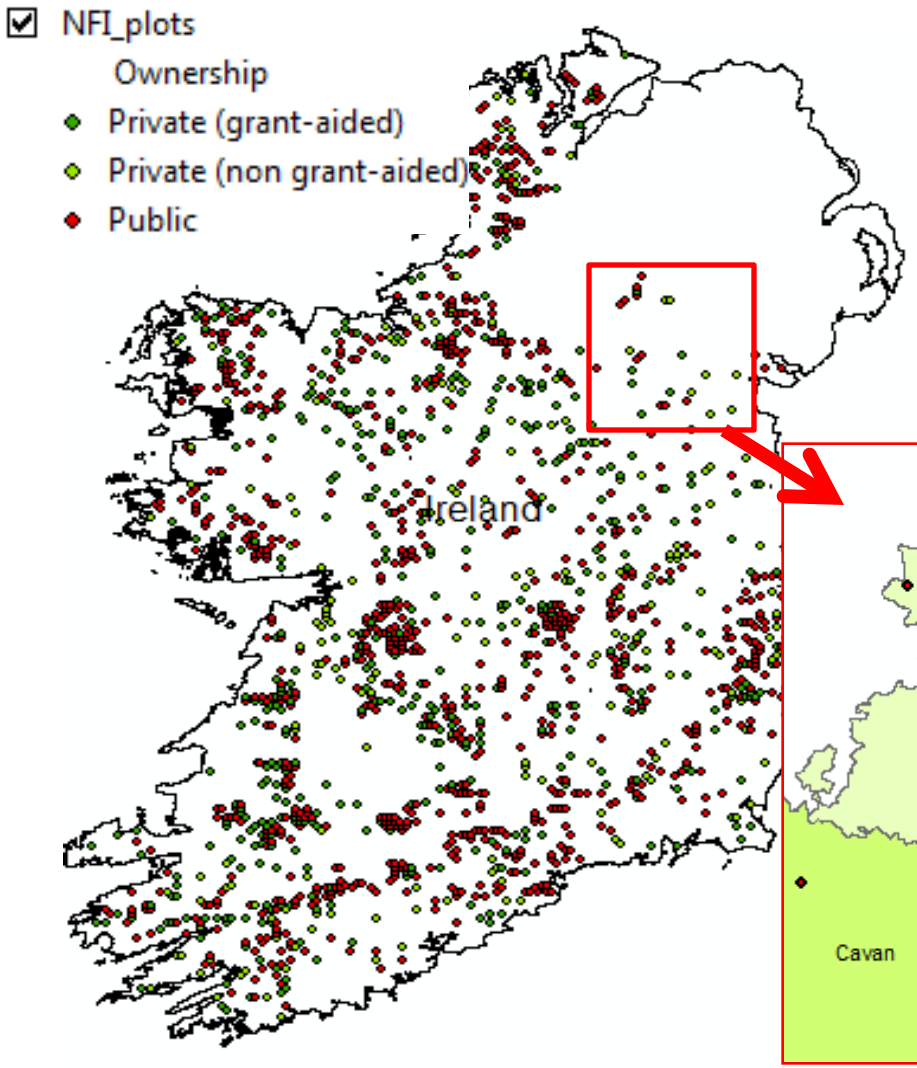
- Develop a web Application which integrates:

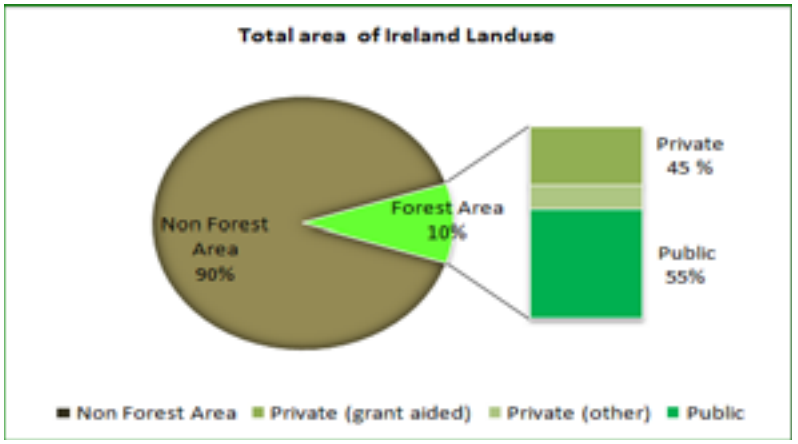
  private sector inventory and management data, forest growth and yield parameter databases and environmental spatial constraints

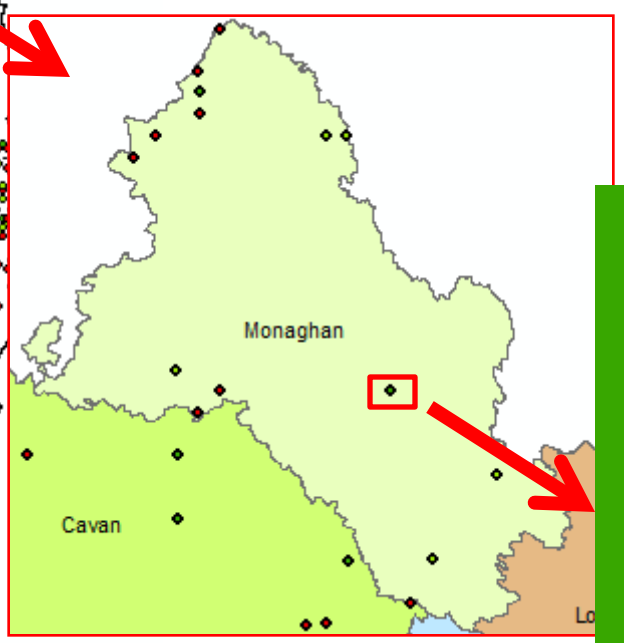
- Web Application generates:

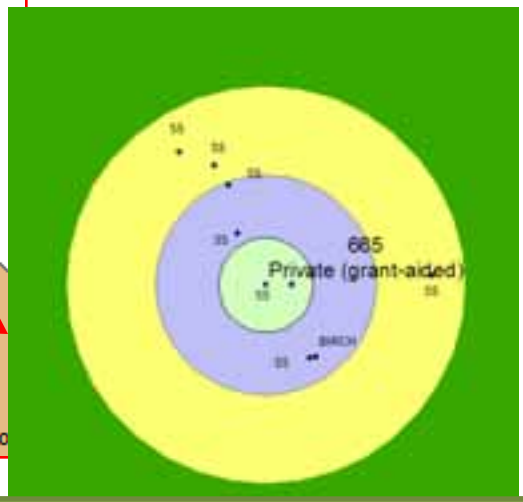
  real-time reliable forest inventory estimates and 25 year timber supply forecasts at all spatial scales through an interactive web based interface and is designed to provide database security and access to forest owners.

National forest inventory plot distribution









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 stratifed estimates and associated 95% confidence intervals.

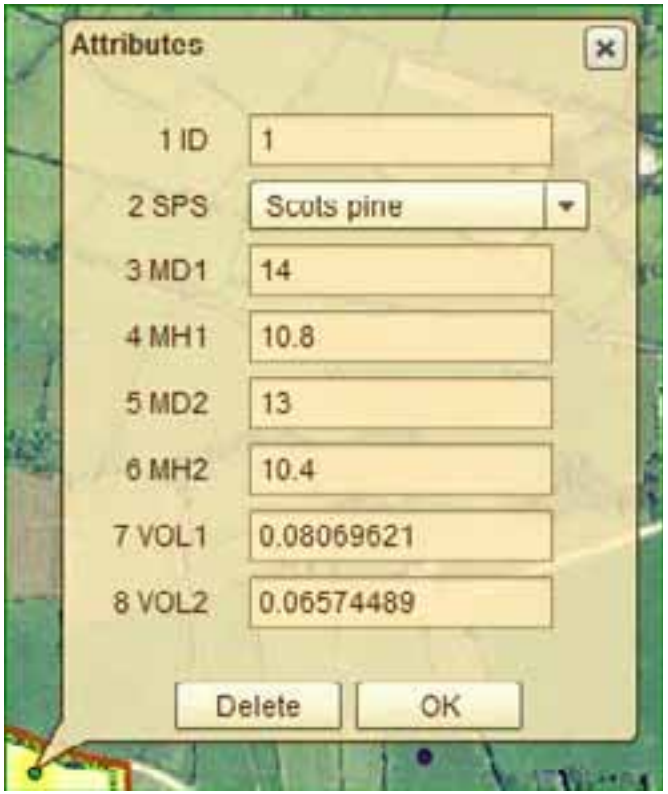
- Computes mean dbh, mean basal area, mean volume and associated 95% confidence intervals to produce reliable forest inventory estimates.

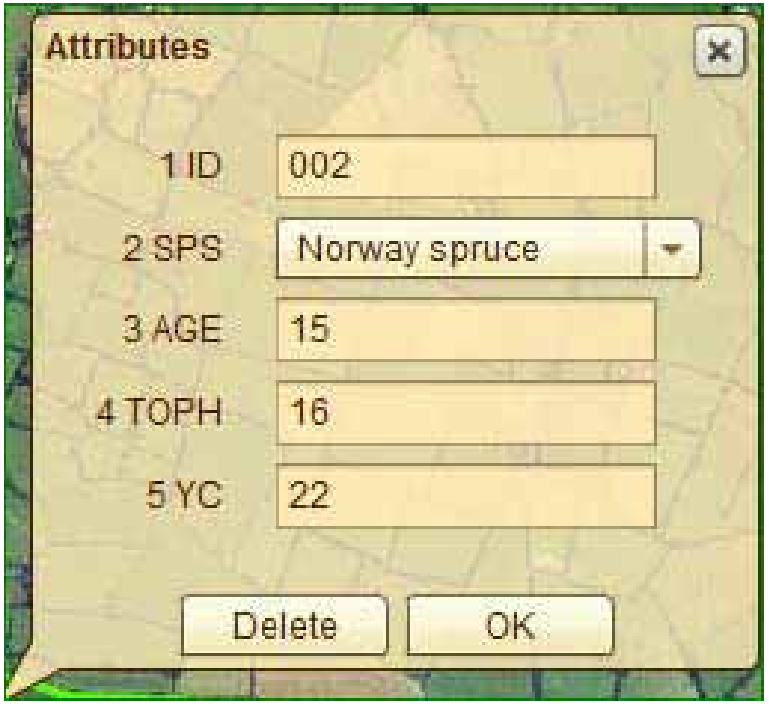
- Computes stand level forecast estimates for top height, cumulative volume production $m^3 ha^{-1}$, average growing stock $m^3 ha^{-1}$, thinning and clearfell volume $m^3 ha^{-1}$ and volume assortments for 25 years with and without geospatial reduction factors.

- The forest inventory and forecast estimates are exported to a zip folder, where they can be saved by the user within the Flex application.

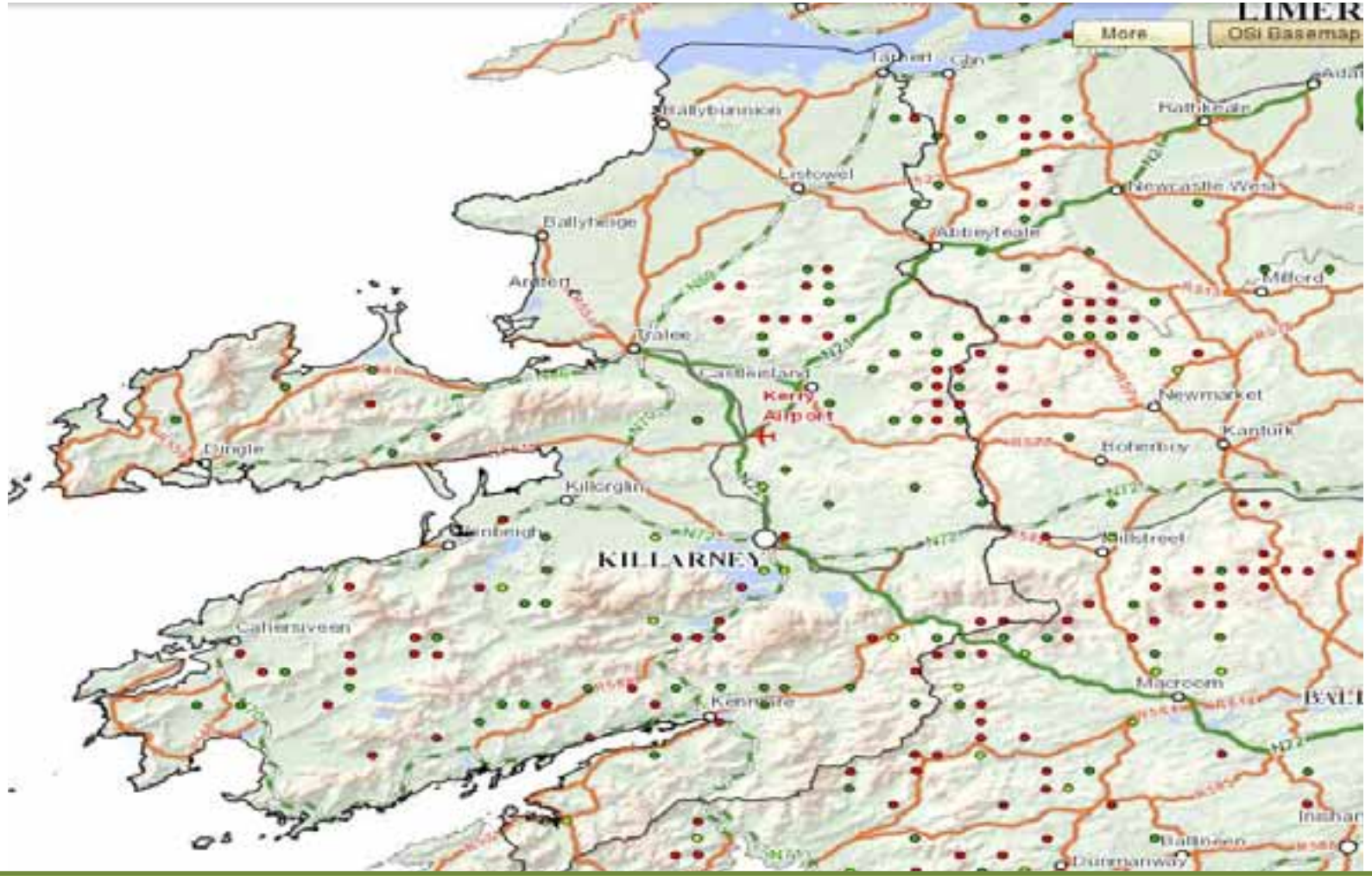
ArcGIS Viewer for Flex web application for forest inventory and timber supply forecasting

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





Location of NFI sampling units in Kerry



Forest inventory - management data interface

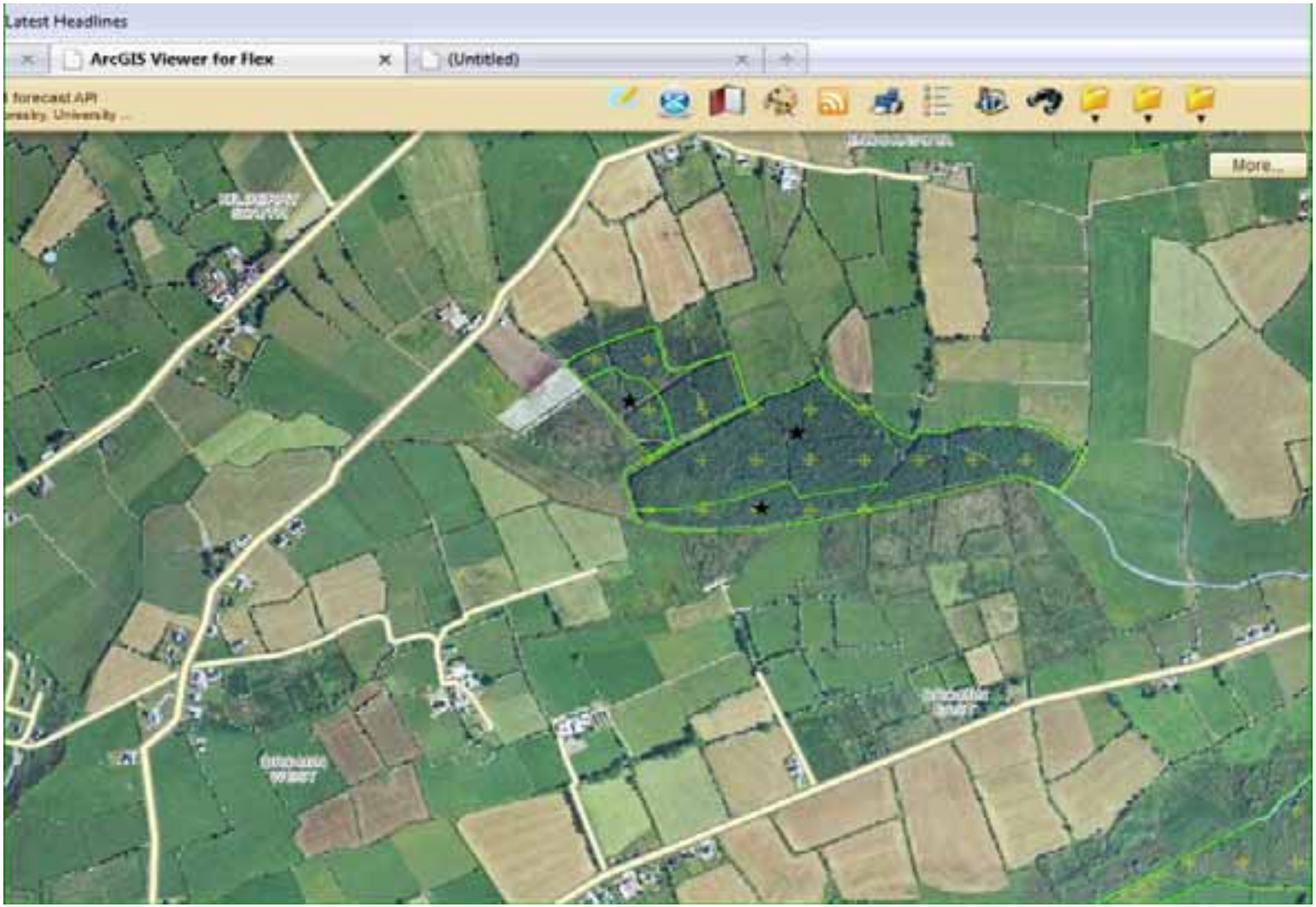
File | Home | Insert | Page Layout | Formulas | Data | Review | View | Developer | Load Test | Team

Cut | Copy | Format Painter | Paste | Clipboard
Times New Roman | 10 | Font
Wrap Text | Merge & Center | Alignment
General | Number
Conditional Formatting | Format as Table | Cell Styles | Styles
Insert | Delete | Format | Cells
Clear

R8

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	MANGT	Thin	Line	Cycle	MTI	ROTN	RED_FAC	Access	Standing	€ pulp	€ pallet	€ sawlog	ROI	County	Wicklow	26
2	INPUT	1	1	4	0.7	1	1	1	1	5	15	45	0.05	Ownership	Private	1
3														Stratum	Small pole	5
4	Forester	O_Malley								TD_cm	TD_cm	TD_cm		Quality	High	1
5	YR_S	2012								7	14	20		Straightness	Straight	1
6	SCID	1003								7	14	20		Branches	Fine	1
7	SC_ha	0.63												Slope of site	Level	1
8	S_STR	5								L_m	L_m	L_m		Extract by	Forwarder	1
9	n_SUs_SC	4								3.1	3.1	3.1		Impediments	None	1
10	SU_n	1		2		2		2		3.1	3.1	3.1		Models	Forestry Co	1
11	E_m	325850		325900		325900		325900						Assortments	Coillte_SS	1
12	N_m	199450		199450		199450		199450						Stratify by	Age classes	1
13	SU_ha	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04					Constraints	All	1
14	Slope	0		22		22		22						NPV based on	Prices suppl	1
15	SPS_SU	SS	LP	SS	LP	SS	LP	SS	LP					Species 1	SS	4
16	n_SPS_SU	2	2	2	2	2	2	2	2	2	2	2	2	Species 2	LP	3

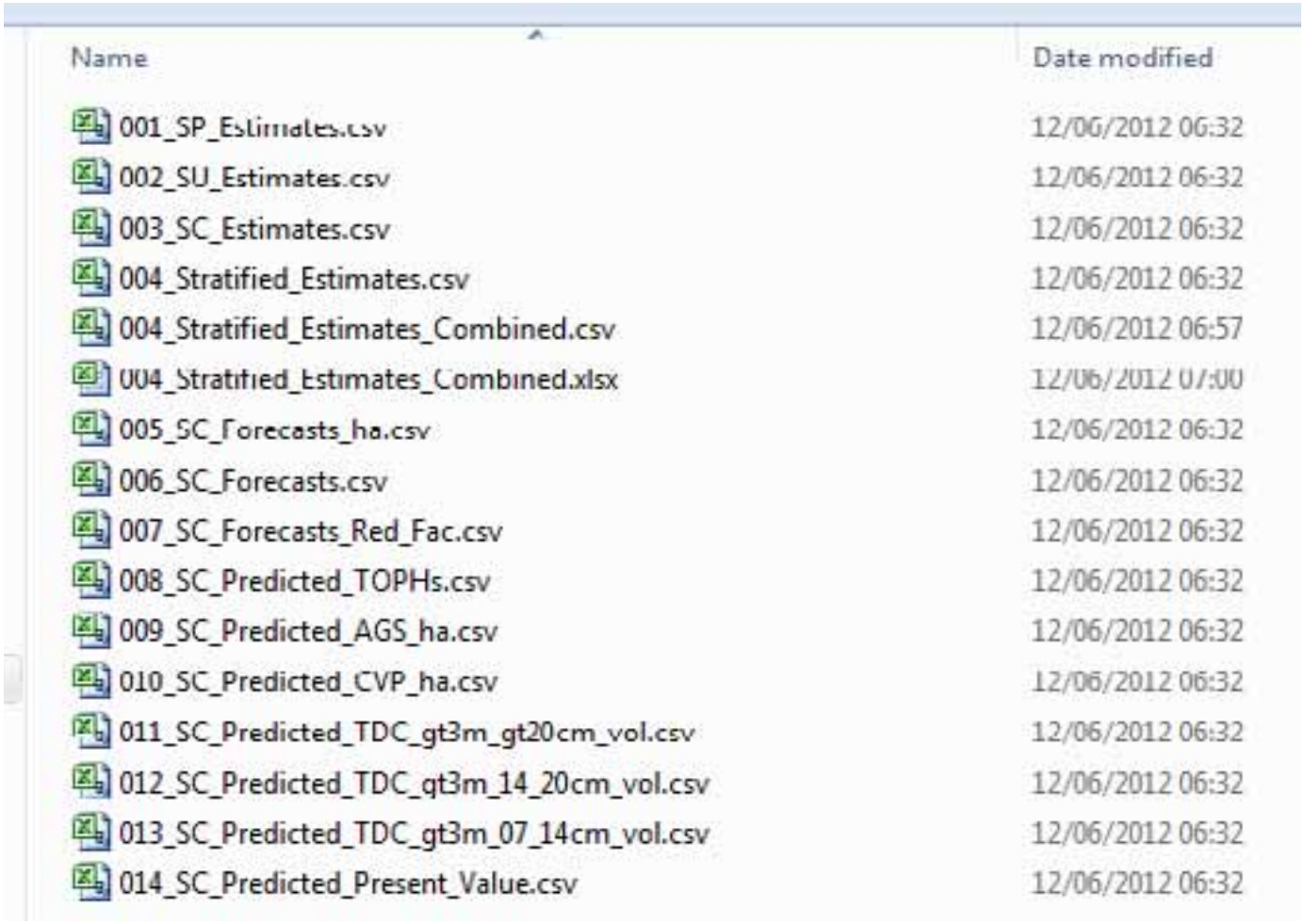
Location of potential sampling units for private sector



Online submission of forest inventory - management data

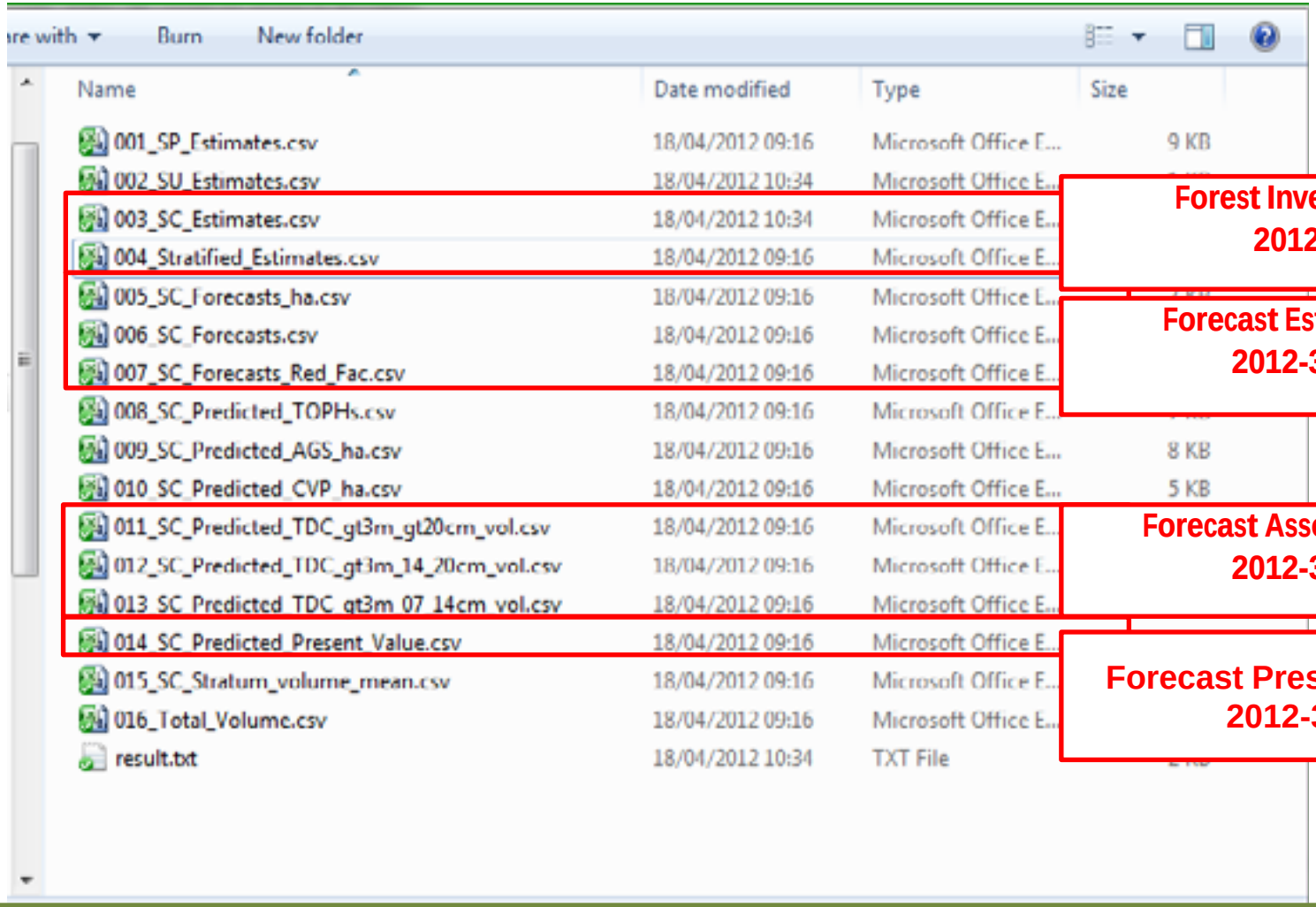
Interactive data NFI and private data extraction and analysis

Forest inventory estimates and 25 year forecasts

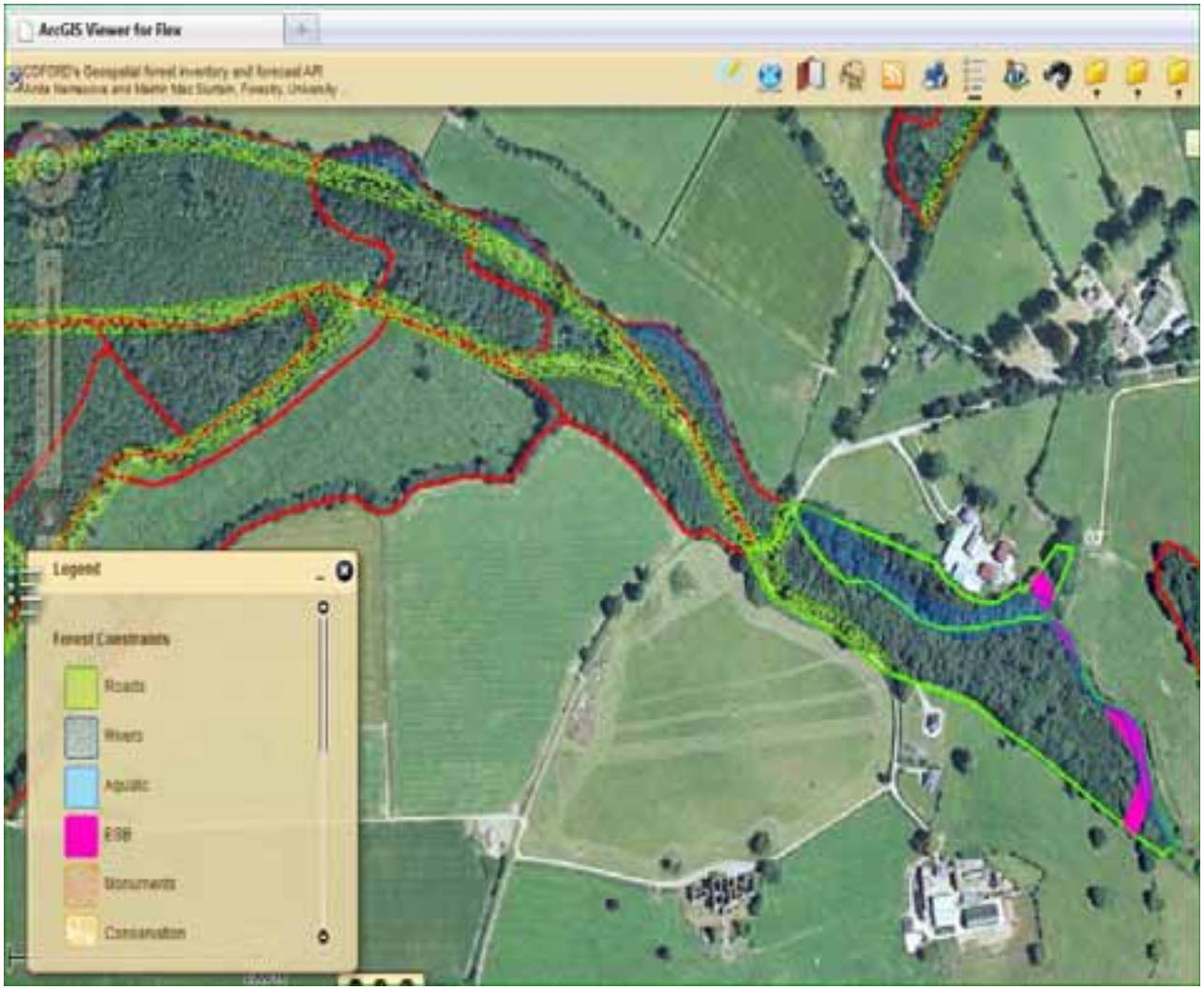


Name	Date modified
001_SP_Estimates.csv	12/06/2012 06:32
002_SU_Estimates.csv	12/06/2012 06:32
003_SC_Estimates.csv	12/06/2012 06:32
004_Stratified_Estimates.csv	12/06/2012 06:32
004_Stratified_Estimates_Combined.csv	12/06/2012 06:57
004_Stratified_Estimates_Combined.xlsx	12/06/2012 07:00
005_SC_Forecasts_ha.csv	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

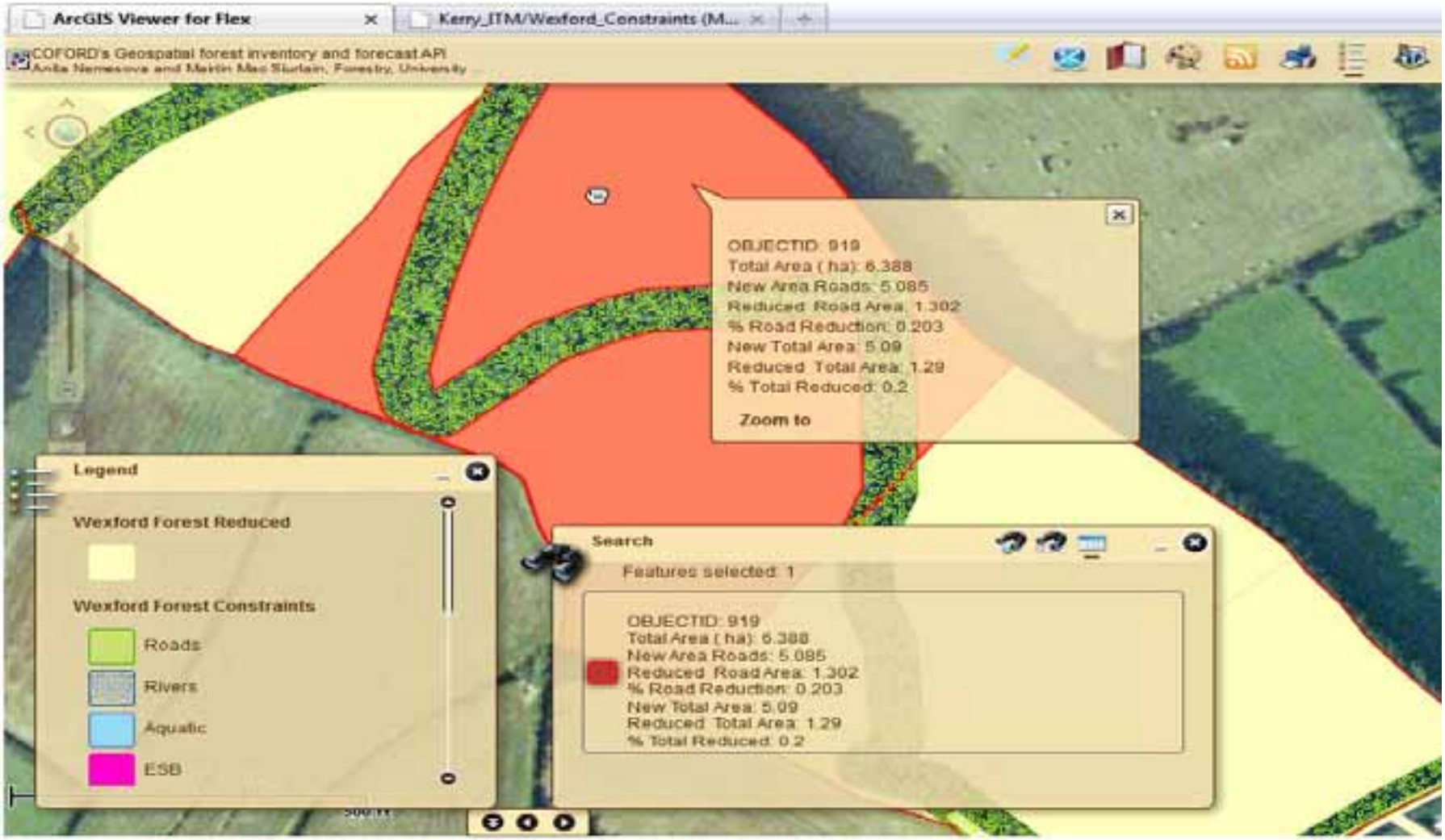
Results from FORECAST program embedded within Flex



Quantify environmental spatial constraints



Environmental spatial constraints



THANK YOU

forecast@ucd.ie