SLOVENIAN FORESTRY INSTITUTE
NEWFOR – PROJECT PARTNER
(SFI –PP7)
April 2013

The fourth Project Report

Report Period 3: 10/2012 – 03/2013

Jaka Klun, Tina Jemec, Matevž Triplat, Robert Robek,
Milan Kobal, Nataša Milenkovič, Nike Krajnc

Fourth interim report of the project NEWFOR covers the period from October 2012 to the end of March 2013. Activities of SFI workers during this period are presented by project work packages (WP). Some activities were realized in cooperation with another Slovenian project partner Slovenia Forest Service (SFS – PP12) and Italian Project Partner Dipartimento Territorio e Sistemi Agro-Forestali – Università degli Studi di Padova (TeSAF – PP10). In fourth reporting period SFI disseminated project objectives to interested public. Analysis of LiDAR data and available ground data was taken. States of the art on different issues were preparing and analyses of different tools were started. SFI started to produce new algorithms and software based on LIDAR data. Analysis of LiDAR data come to second phase – modeling inventory data.SFI also attended at third project partner meeting in Pellizzano in Italy. Issued CoE for the third RP was already forwarded to leading partner; CoE for the fourth RP is still in preparation phase.

The fourth Project Report

Report period 4:

10/2012 – 03/2013

WP 2

Within WP 2 **Project Managment** coordination of activities in SFI Newfor project working group, internal project meetings, assignments of different tasks to workgroup members, financial reporting, preparation of fourth progress report were realized. Received CoE from FLC for the third reporting period were send to LP. SFI participate at project partner meeting in Pellizzano (Italy) and organized 2 meetings of Slovenian partners: SFI and SFS to harmonize all activities in pilot areas.

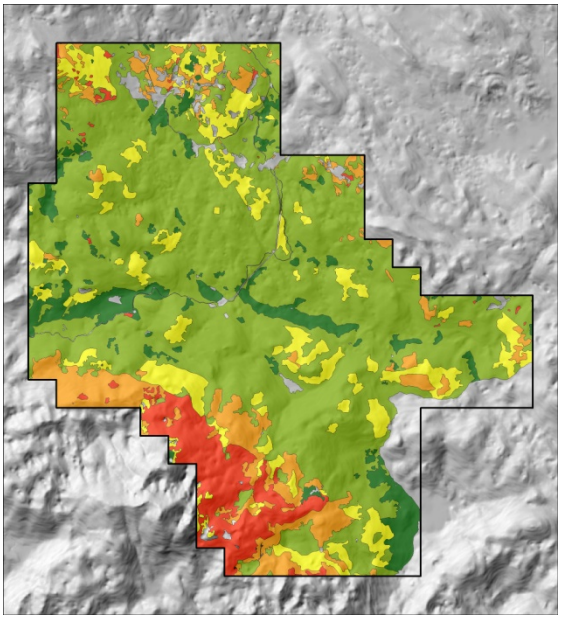
WP 3

Within WP 3 **Information & Publicity**
SFI started with set of activities for presentation of project objectives and expected outputs relevant for interested stakeholders and other public. A template for good practice examples was prepared and shared with SFS. A template for project newsletter – in Slovenian language was prepared. Data for these two activities are prepared and we are planning to publish them on web page in next RP.

Project was presented at 2nd development day of forest and wood processing sector. It was held as side event of biggest fair of wood processing sector (9.11.2013). Project is presented to wider public in downloadable proceedings of the event. See link below:
https://dl.dropboxusercontent.com/u/11076869/Zbornik_%202_RAZVOJNI_DAN_GOZDNO_LESNEGA_SEKTORJA_8nov2012.pdf

WP 4

Within WP 4 **Forest resources & LIDAR** we analysed databases of digital terrain models. Also GIS spatial layers were derived from that data, which are going to be used for further analysis and comparison.

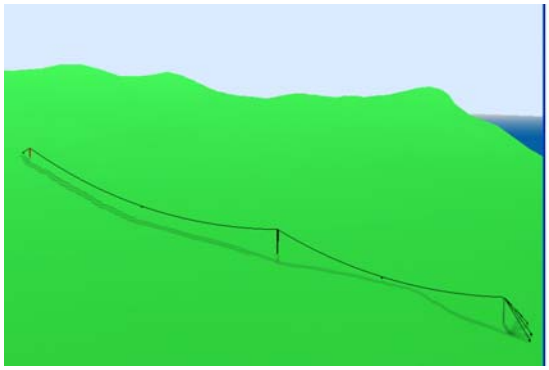


During the report period 3 Milan Kobal (SFI) modelling LIDAR data to estimate and visualise of timber growing stock (GS). The first attempt of modelling GS of forest stands (PA Leskova Dolina) reveal that data could be appropriate for modelling GS in uneven aged mixed forests. Based on sampling plots (measured DBH and H, area 0.2 ha) estimated average GS is 642,4. Comparisons with terrain data follow till next RP.

We started to cooperate with PP2 for organization of UAV flight and test our pilot area. Places for possible take-off for the plane were defined. SFI is collecting data and preparing list of available providers for LIDAR recording and some development milestones of LIDAR technologies in Slovenia.

WP 5

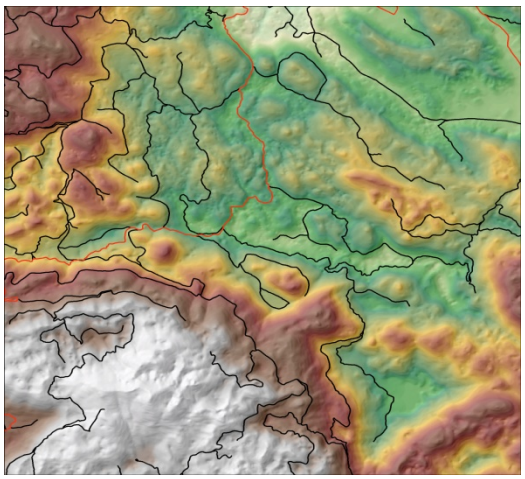
Within WP 5 **Forest accessibility** we are developing software (based on R-code) for optimization of cable corridors in PA. In cooperation with PP10 we are developing WEB-tool for this code. An algorithm for automatic cable crane placement, based on defined criteria, is still under development. In cooperation with TeSAF (PP 10) they will be implemented in the Web-GIS application.



We developing also user friendly 3D-visualization of single cable line layout called NEWFOR-CABLEWAY. Another focus in this reporting period was on gathering the data of harvesting technologies in alpine space among private forest owners and forestry professionals. SFI cooperate in preparation of methodology for survey of mechanization used among bigger forestry companies in rounded Alpine Space PA. There also ongoing work on preparation of success stories in collaboration with SFS. SFI started activities to purchase and test software for LIDAR data implementation in forest road engineering (Roadeng) and will in next phase test if it is possible also to use LIDAR data environment for extracting forest roads.

WP 6

Within WP 6 **Forest & Industry Connectivity** we prepared general presentation of the wood transport sector in Slovenia. Our representative took part at SLU (Swedish University of Agricultural Sciences) training for logistic planning and cost related tools. According to template provided from PP6 we have prepared paper about wood transport sector. Together with paper about forest road data base (prepared by PP12) this will present state of the art for Slovenia. SFI will analyze and present promised recently developed Slovenian forestry logistics software LOGISLED. It will start immediately after first release of operational version. SFI will overview possibilities of implementation our forest road data base to logistics software.



WP 7

Within WP 7 **Costs&benefits evaluation** some activities were focused on analyses and comparison of outputs of different tools in use for cost calculation in forestry. State of the art on tools has been finished and presented at first WP meeting. In next phase we will prepare a common template for. Fast translation of HeProMo-software has been done in order to relieve collecting he data for testing of HeProMo. One bigger forest entrepreneur from pilot area has already send us the input data for HeProMo. In next phase we will test it and compare it with actual cost and the cost calculated with Slovenian normative.

WP 8

One of the objectives of WP8 **Logistical planning strategy** is to provide forest managers and decision makers with reliable information for the evaluation of technical and economical conditions for their decision-making on timber supply chain logistical planning and land use strategies.

The development of a Web-GIS tool for optimal cable layout and supplementary user friendly 3D visualization of single line layout and unified tool based on methodology are in testing phase and will be published in NEWFOR website. A cost calculation of forest operations seems to be good idea to live on as interactive tool after project comes to the end.