1.3. Content of the study courses

The subjects (focus areas) developed in the combined project scheme OPLWSO & AFRFRN have been outlined as follows.

FOPC basic content
- • Basic design of advanced operating systems and methods in Cut-To-Length (CTL) logging, silviculture and wood supply/logistics.
- • Systems Analysis as a tool for screening, evaluation and selection of high performance operating chains, systems and resources.
- • Structure of steering system for logging, silviculture and wood supply including strategic priorities with horizon 10–25 years and operational decisions in four main steps with horizons 10 years, 5 years, Annual and Monthly-weekly.
- • Specification of operational efficiency criteria and models for productivity and cost in the Forest Operation Chain.
- • Outline of the IT-platform for the steering system including data base structure in GIS and digital chain from stump to industry.

Developed inventory work in a logging tract, connected to a digital chain of data, is shown in Figure 4.

Figure 4. Measurement and recording by data calliper and field computer (photo by forest engineer Pavel Bezverkhov)

FRAP basic content

Coordination in planning and priorities between Forest and Roads Operations to create conditions for total efficiency in the Forest Operation Chain.

• Forest Road planning system **starting** with strategic time perspectives of 10–25 years, followed by **tactical** issues with horizons of 10–5 years, down to operational approach of Annual-Monthly-Weekly planning with coordination of forest and road operations.

• Economic calculation models on location, density and standard of the Forest Road Network.

• Forest Road survey.

• Forest Road design and construction systems.

• Forest Road maintenance and management systems.

• Forest Road machinery and equipment.

Principles for the design of data bases and digital chain is illustrated in Figure 5.
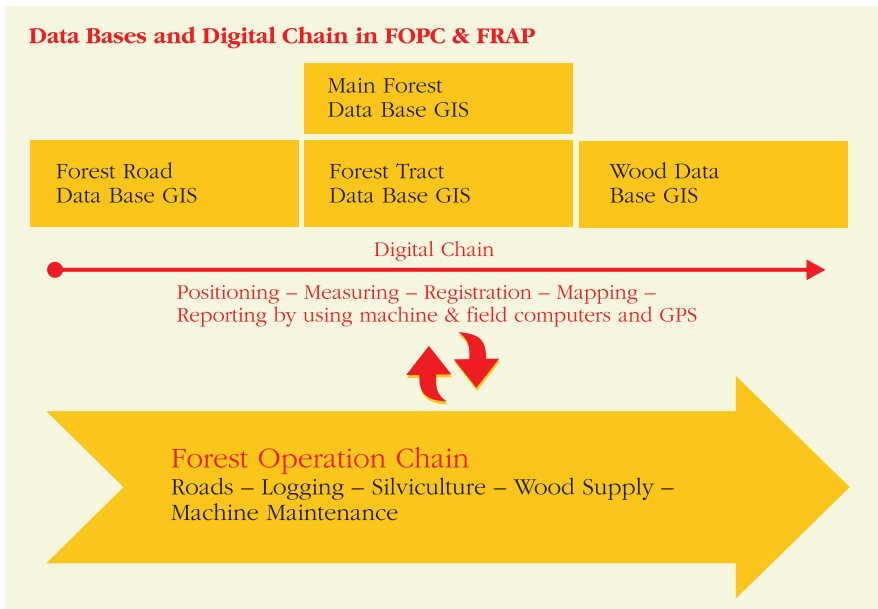

Figure 5. Outline graph on data base structure with Digital Chain in FOPC & FRAP

29