TRACKING OF TROPICAL FOREST OPERATION WITH FIELD-MAP, Ucayali - Perú

CLUSTER FORESTAL UCAYALI

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TRACKING OF TROPICAL FOREST OPERATION WITH FIELD-MAP

Introduction

- In Peru, tracking was just applied, where harvesting field was certified by FSC, at least 20% was done by this way. OSINFOR (the Supervisory Body for Forest and Wildlife Resources) during supervision operation were found 80% of harvesting field, laying on illegal looging. According to The new Forestry and Wildlife Law is making pressure to implement tracking as a tool for improving origin control to tackle illegal logging.

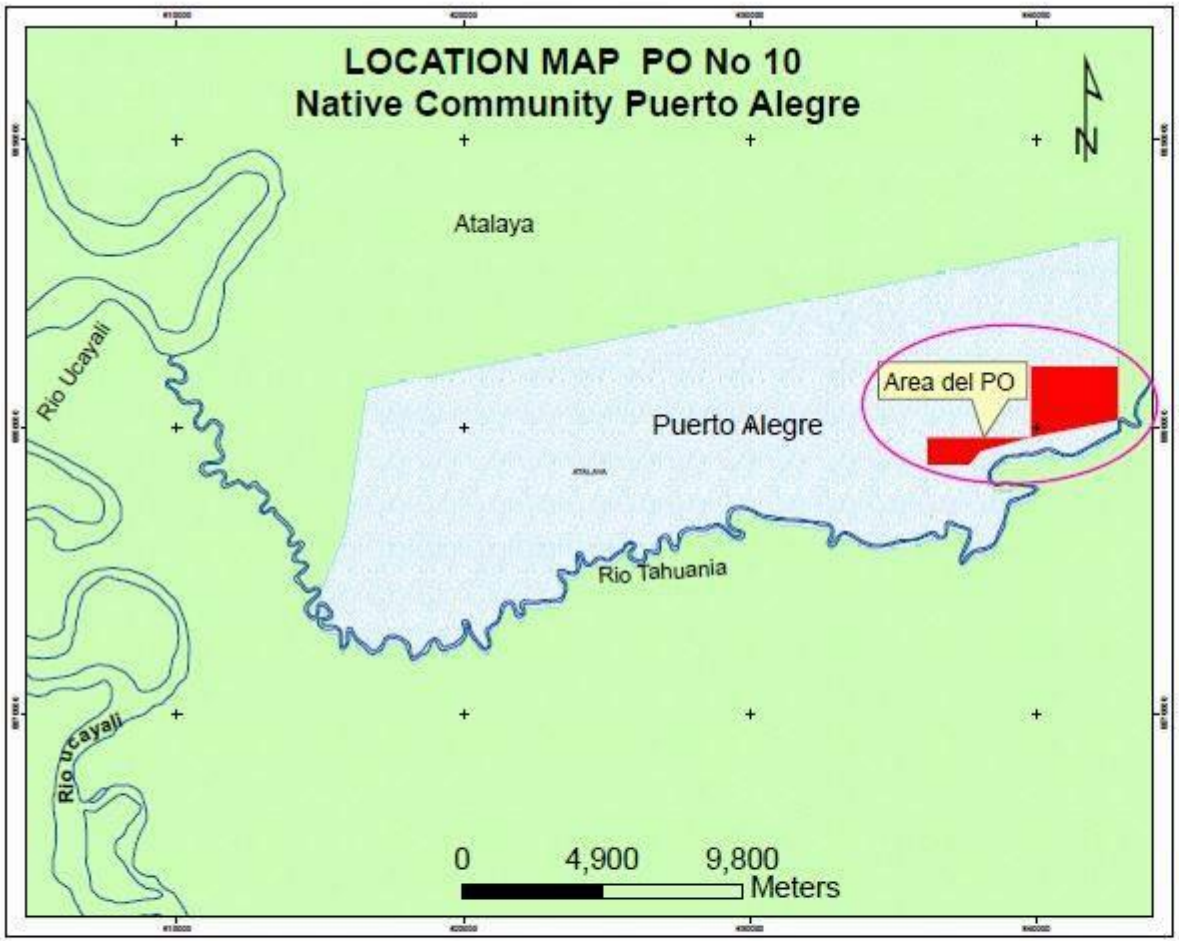
- Field Map is a solid technology with many aplications being thus versatile, no forget data collecting on real time. Field Map can do monitoring for each process in harvesting operation (logging, skidding,restructure in stockyard and transporting), as well as could help to build up yield tables (timber,worker, fuel and so on). All this data gathered it wil be a source for monitoring carbon footprint, to attain the trade off those lost with reforestation and forest management for its implementing.

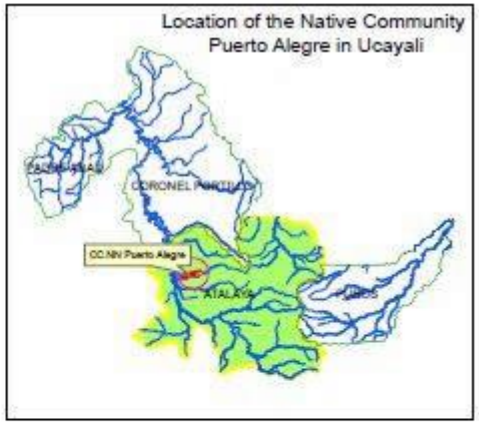
TRACKING OF TROPICAL FOREST OPERATION WITH FIELD-MAP

Introduction

- The present work is an important start, led by CLUSTER TROPICAL UCAYALI (CFU) and TROPICAL FOREST DEVELOPMENT SRL, with collaborative peer and support on international level "Field-Map". Who with its experience aided up the timber tracking pilot project in an authorized forestry area that belong to an Indigenous Community "Puerto Alegre"(Ucayali - Peru) with 874 ha of harvesting field 2016. This pilot project will be useful for base model on the diverse operations, currently member of CFU are looking forward to get done.

PILOT PROJECT LOCATION





LOCATION MAP PO No 10 Native Community Puerto Alegre		
Location: Region : Ucayali Province : Atalaya District: Tahuania Basin: Rio Tahuania	Area de la CC.NN: 21720.085 Ha. Area del PO 10: 874 Ha.	ZONE 18 WGS 84 Scale : 1 / 100 000

LEGEND

- Hydrology
- Area PO 10
- CC.NN Puerto Alegre

Accessibility PO 10: River City Via Pucallpa upstream to the caserio Bolognesi 10 hours slider (60hp) .From Bolognesi access road is a stretch of about 50 km (1 hour by truck). To reach the PO-10 from the center of the native community via road a period of approximately 45 min.

Harvesting operation system

INVENTORY

LOGGING

SUPERVISION

LOG (CARGAS)

SKIDDING

RIVER TRANSPORT

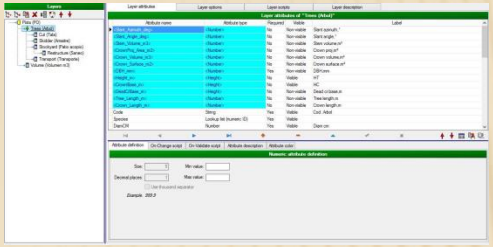
TERRESTRIAL TRANSPORT

MONITORING

RESTRUCTURE IN STOCKYARD

BASIC REQUIREMENT FOR TRACKING PROCESS:

1. GUIDELINE/PROTOCOLS.
2. TO DESIGN BASE MODEL PROJECT IN FIELD-MAP.
3. FORMS FOR RECORDING DATA (INVENTORY, LOGGING, SKIDDING, RESTRUTURE IN STOCKYARD, TRANSPORTING).
4. TO HAVE AN INSPECTOR FOR EACH OPERATION.
5. RECORDING AND MONITORING.
6. MEASUREMENT , MARK AND TAG EVERY PROCESS.
7. VOLUMEN CONTROL BY SPECIES/YIELD.
8. PERMANENT TRAINING.



Inventory

Logging

skidding

Stockyard

Transport

PA10B-F1-2

PA10B-F1-2A

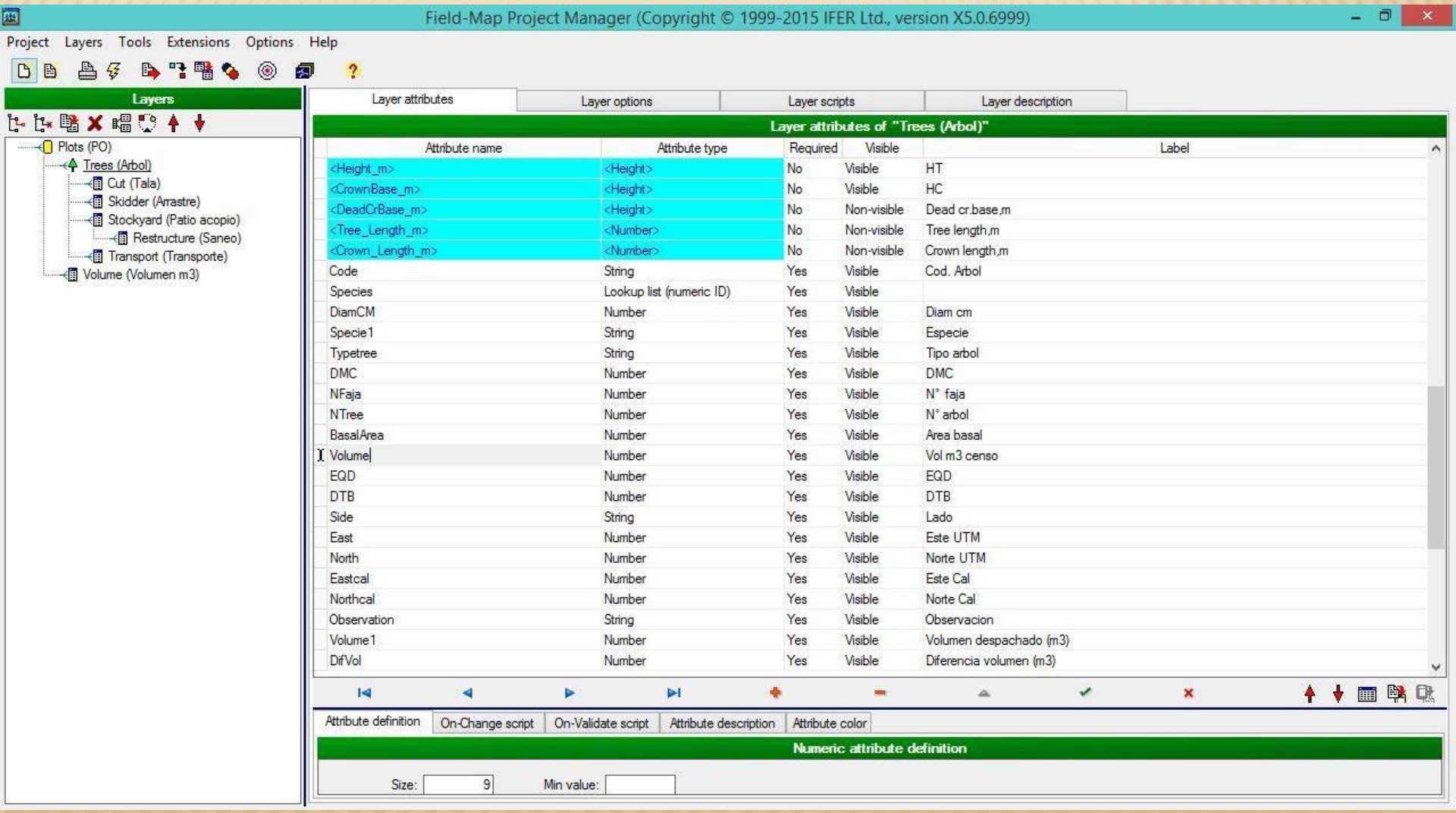
PA10B-F1-2A
PA10B-F1-2B

PA10B-F1-2A1
PA10B-F1-2A2

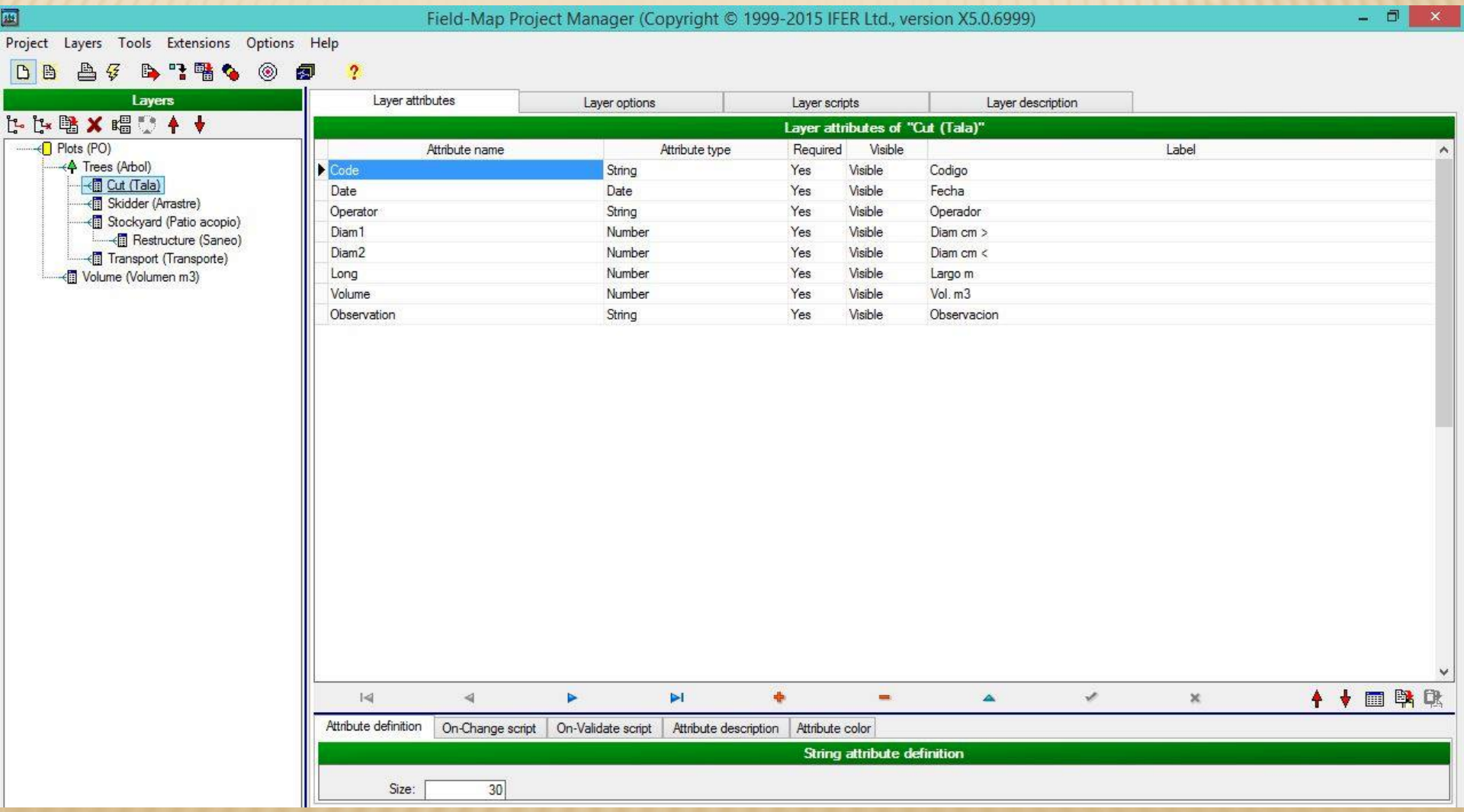
PA10B-F1-2A1
PA10B-000001

TIMBER TRACKING FOR HARVESTING OPERATION WITH FIELD MAP TECHNOLOGY

TRACKING OF TROPICAL FOREST OPERATION WITH FIELD-MAP DESIGN PROJECT MODEL - INVENTORY

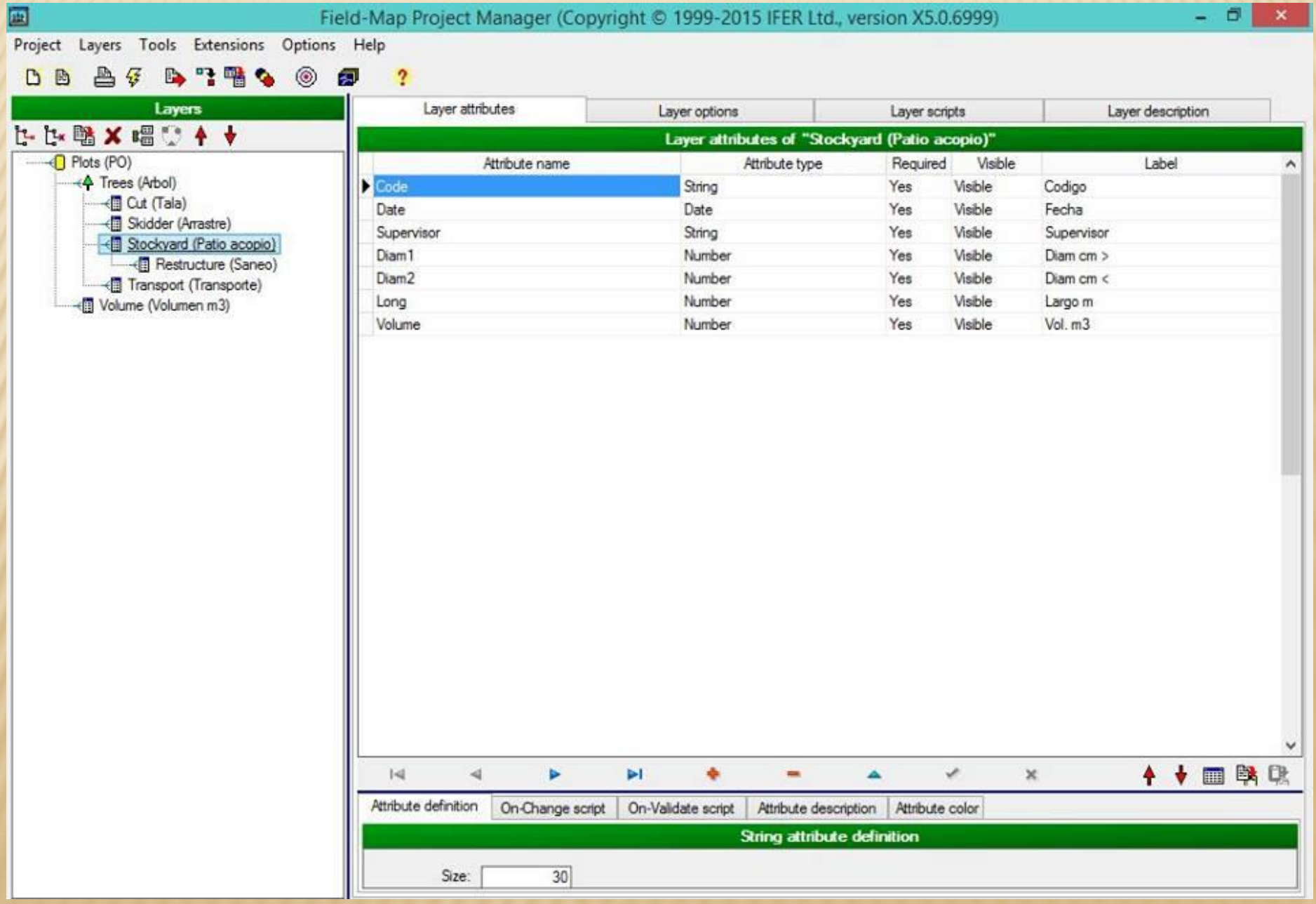


DATABASE FOR LOGGING (CUT)

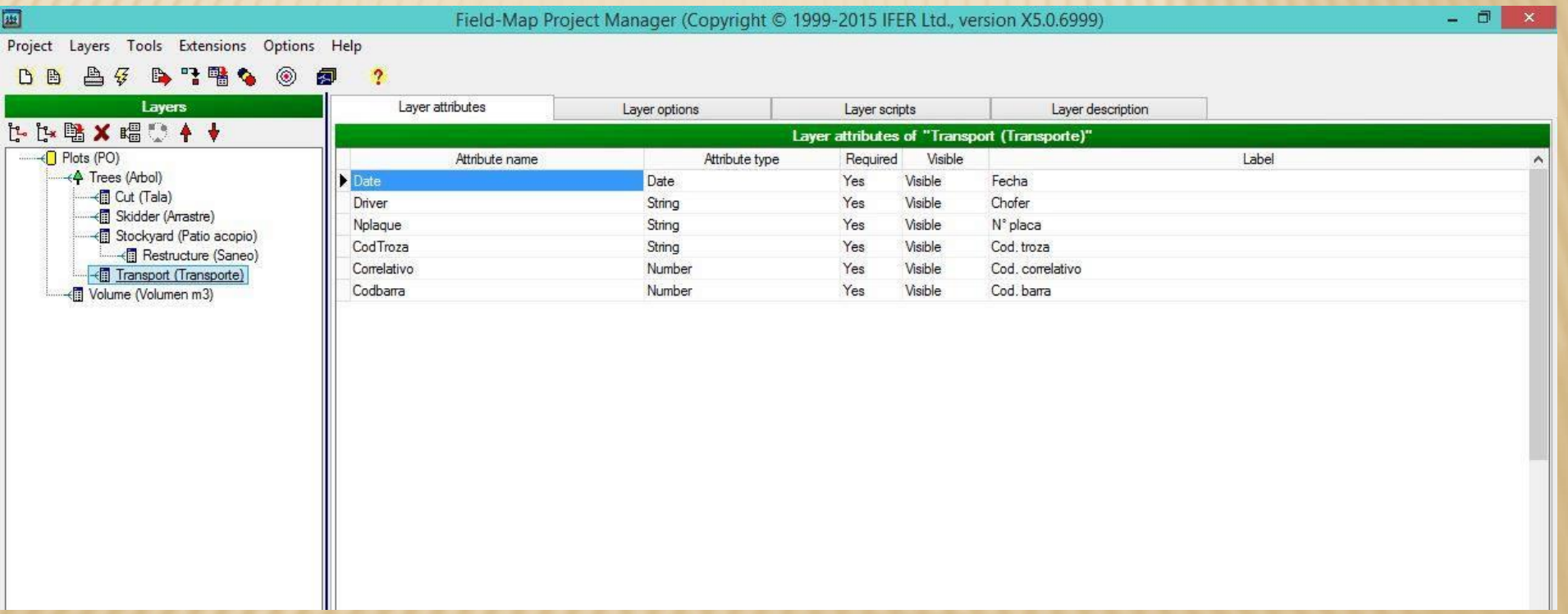


DATABASE FOR SKIDDING

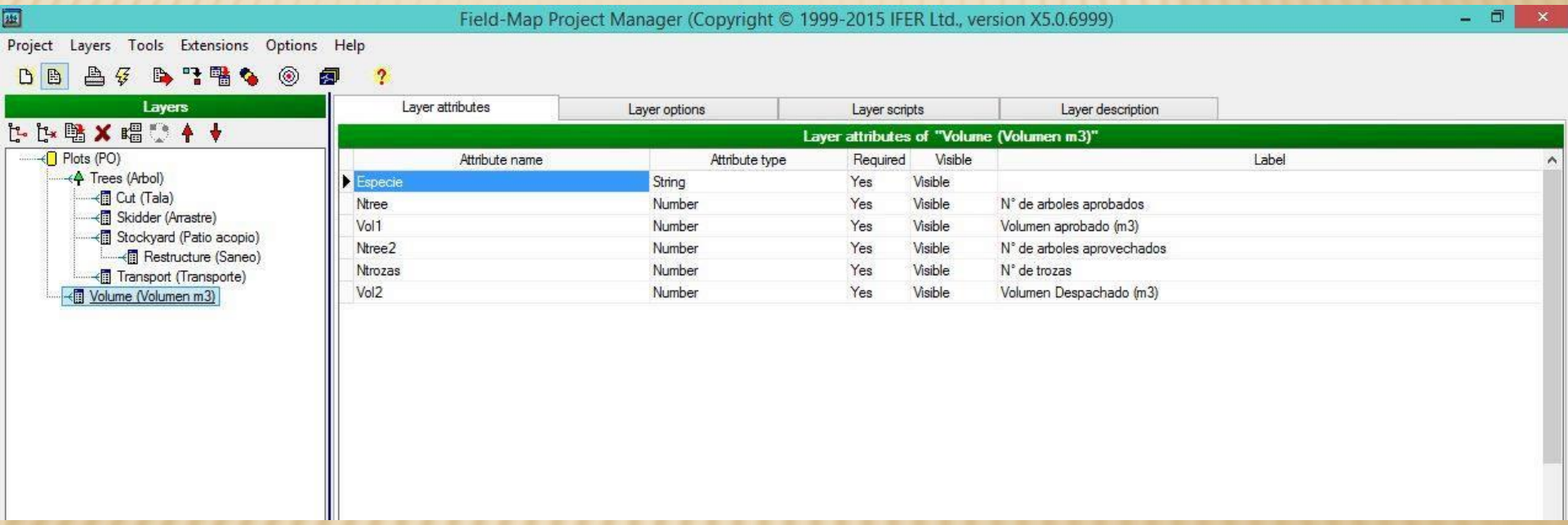
DATABASE FOR STOCKYARD



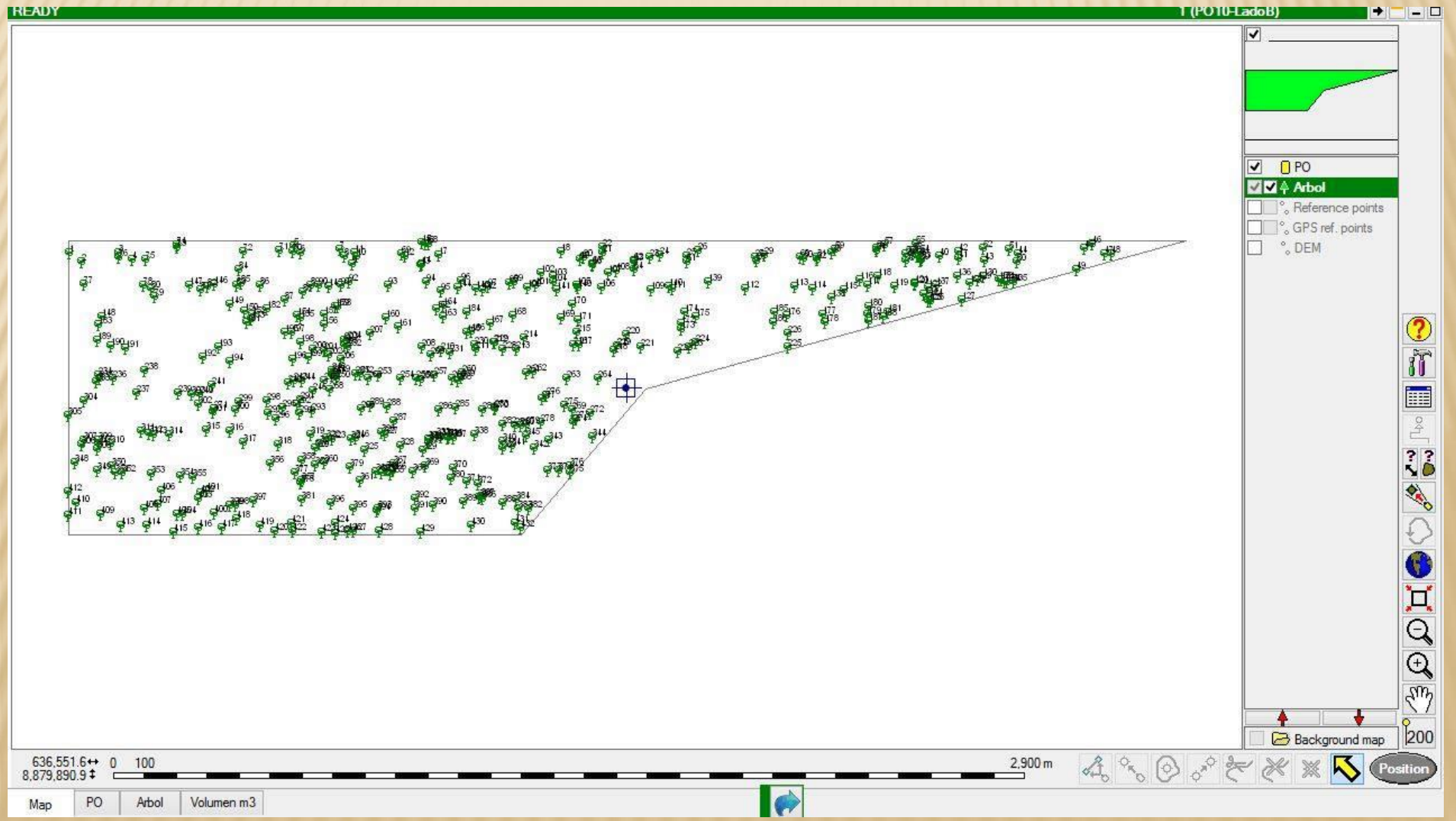
DATABASE FOR TRANSPORTING



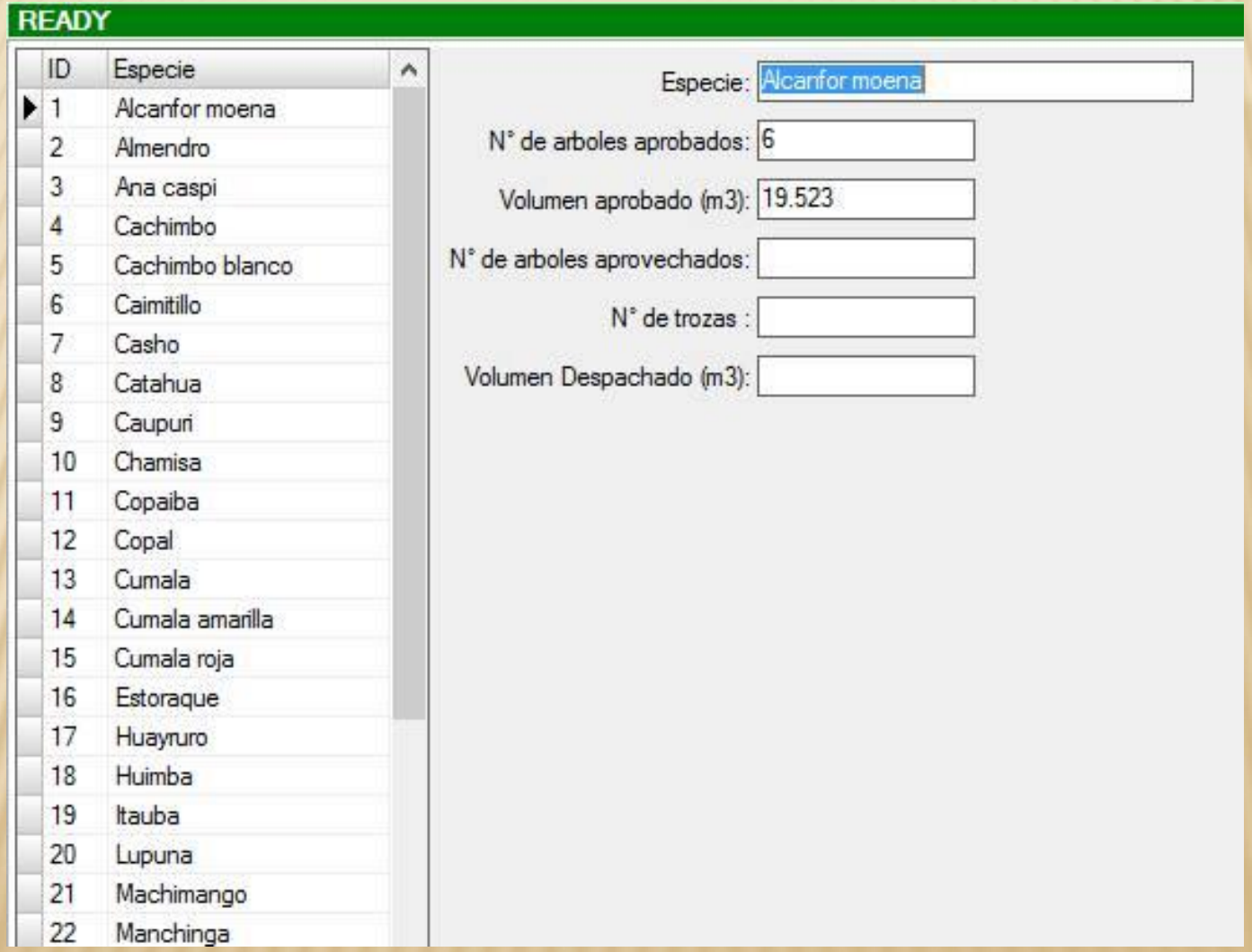
DATABASE FOR VOLUMEN CONTROL BY SPECIES



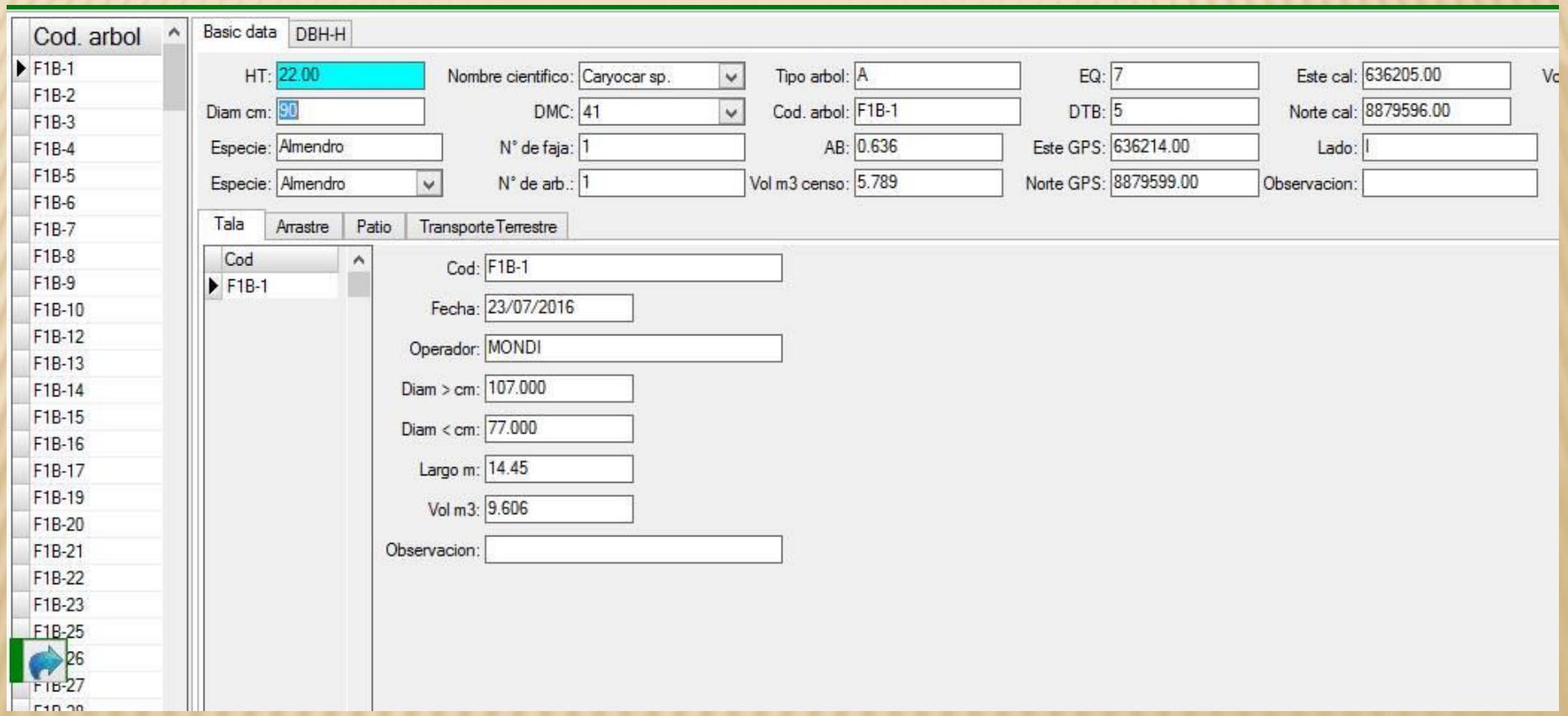
DATA DISPERSION MAP OF AUTHORIZED TREES FOR HARVESTING OPERATIONS



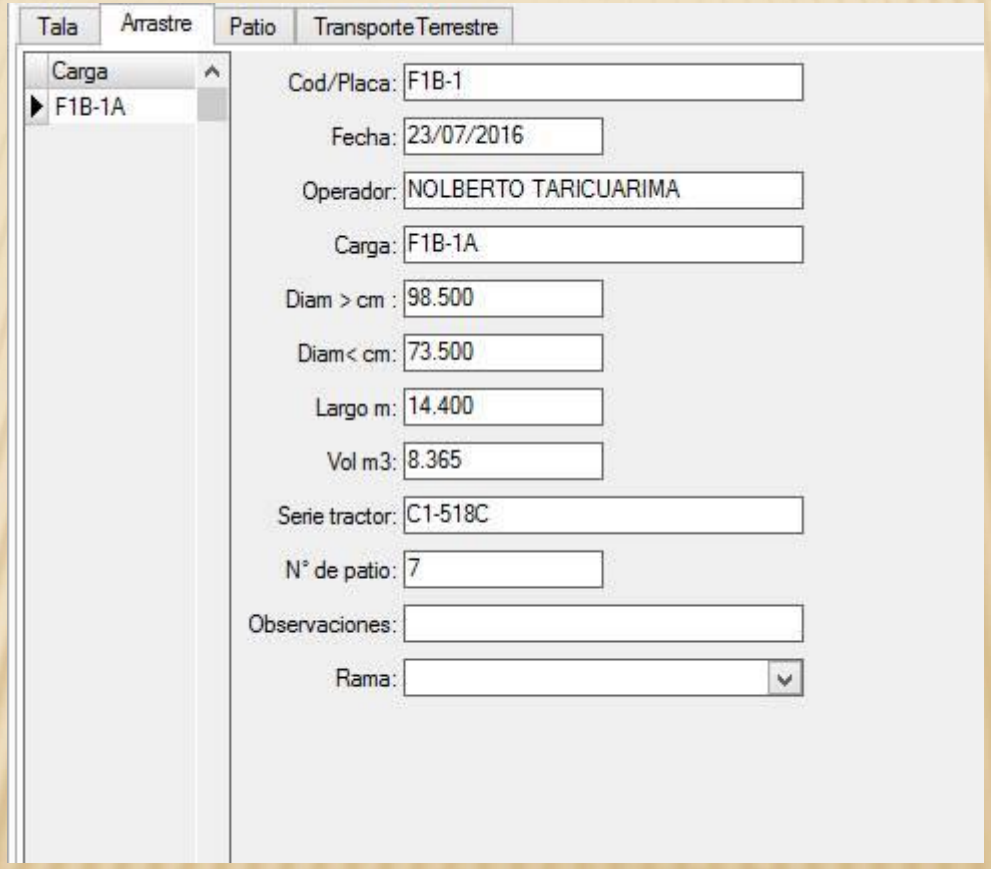
VOLUMEN DATA BY SPECIES



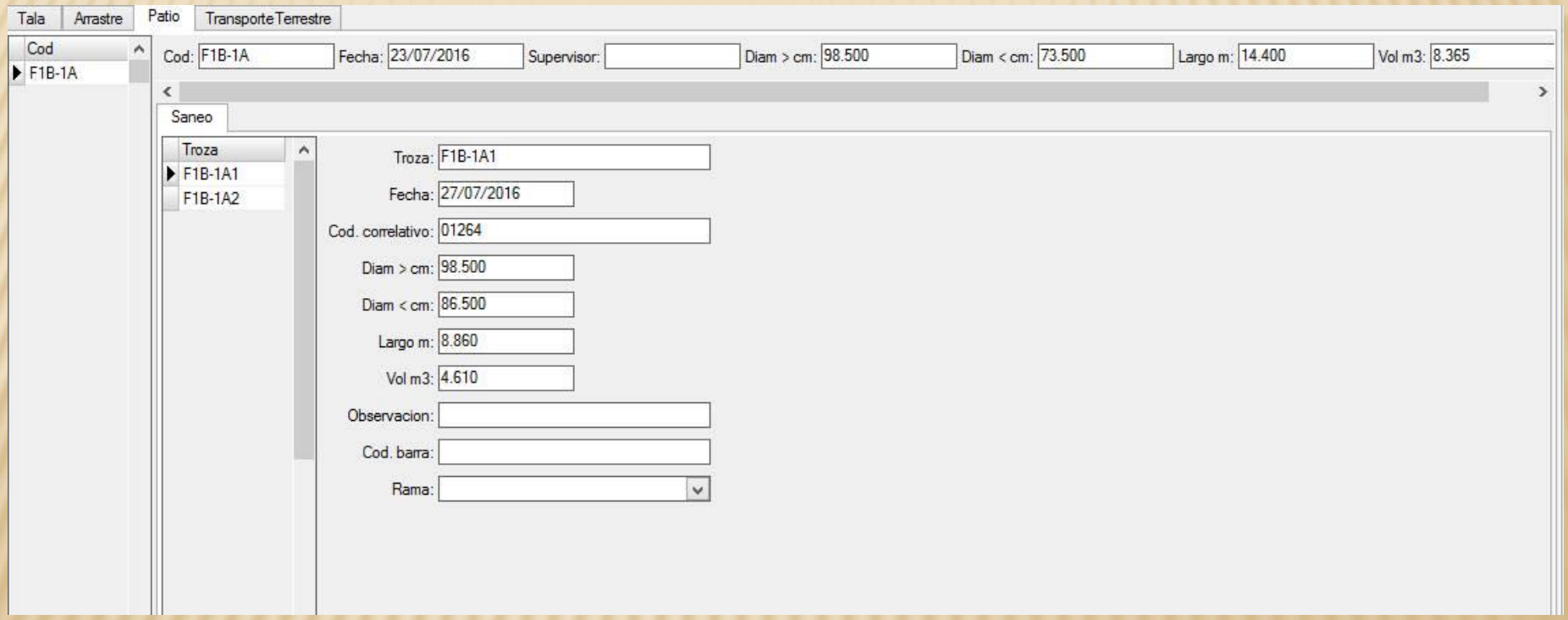
RECORD TABLE BY AUTHORIZED TREE



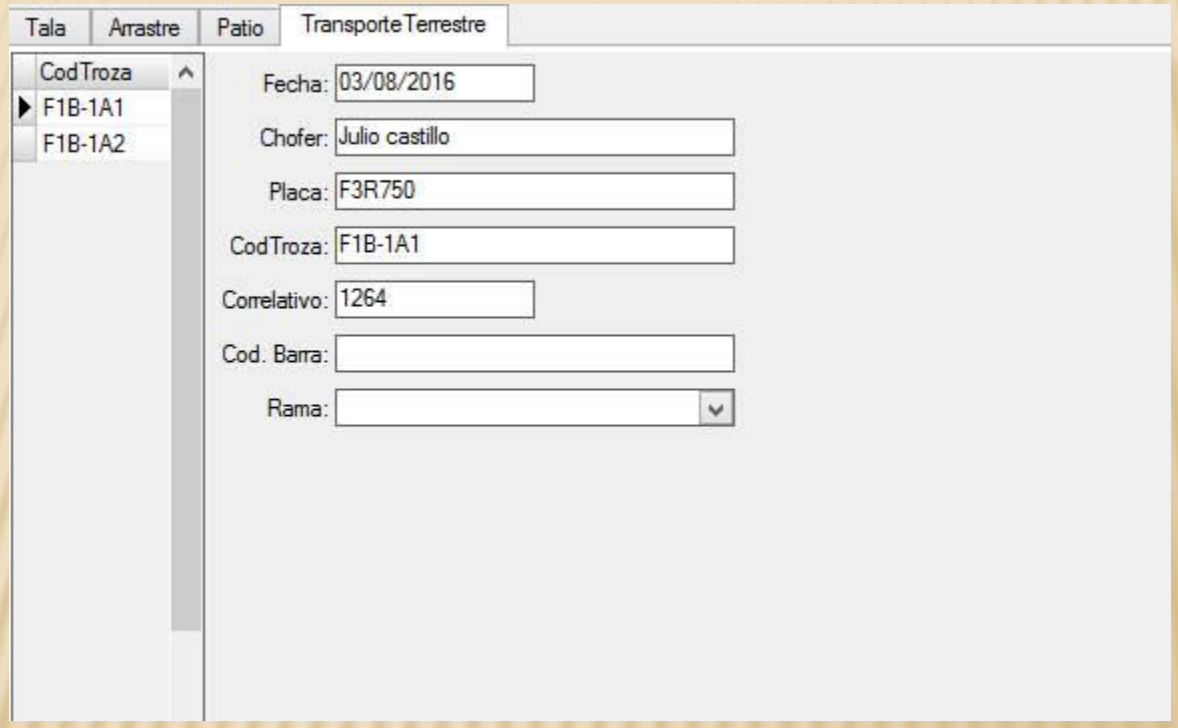
RECORD TABLE FOR SKIDDING, ACOORDING TO AUTHORIZED TREE



RECORD TABLE FOR RESTRUCTURE IN THE STOCKYARD, ACOORDING TO AUTHORIZED TREE



RECORD TABLE FOR TRANSPORTING, ACOORDING TO AUTHORIZED TREE



RESULTS

informacion trazabilidad					AUTORIZADO		ANALISIS			
Etiquetas de fila	arb. Censo	vol censo	arb talados	vol tala	arbol	vol total	SALDO ARB	SALDO VOL	PORC. ARB	PORC VOL
Estoraque	1	4.555061211	1	6.199724743	1	4.555	0	(1.64)	100%	136%
Pumaquiro	4	23.03135234	4	50.56024743	7	40.833	3	(9.73)	57%	124%
Tornillo	48	413.24116	48	735.9602694	74	638.478	26	(97.48)	65%	115%
Huayruro	50	359.2727684	50	593.2853083	88	579.059	38	(14.23)	57%	102%
Lupuna	6	74.78323152	6	136.9954408	16	159.829	10	22.83	38%	86%
Cachimbo	102	624.2722419	102	1073.050138	254	1350.475	152	277.42	40%	79%
Copal	17	100.4771998	17	180.9785765	43	229.381	26	48.40	40%	79%
Copaiba	22	163.9141373	22	279.478019	58	360.706	36	81.23	38%	77%
Shihuahuaco	41	239.6182829	41	354.4923108	96	517.349	55	162.86	43%	69%
Almendro	28	177.0703894	28	282.1928549	82	443.324	54	161.13	34%	64%
Panguana	14	130.1141161	14	137.2904343	31	231.24	17	93.95	45%	59%
Cachimbo blanco	8	54.54135687	8	78.67741258	21	144.429	13	65.75	38%	54%
Catahua	6	35.90524037	6	54.98125244	21	106.012	15	51.03	29%	52%
Tahuari	4	23.9660451	4	42.4603969	19	88.218	15	45.76	21%	48%
Itauba	3	38.15772689	3	35.4886058	8	76.499	5	41.01	38%	46%
Palo Lima	8	56.22200684	8	67.67122208	22	163.917	14	96.25	36%	41%
Pashaco	9	53.43094657	9	101.5595397	60	298.158	51	196.60	15%	34%
Ana caspi	6	46.61380023	6	51.72578799	30	157.058	24	105.33	20%	33%
Cumala roja	21	125.3708926	21	165.4905	121	505.163	100	339.67	17%	33%
Moena	5	33.51314366	5	40.56354468	20	124.356	15	83.79	25%	33%
Alcanfor moena	1	3.895854963	1	5.855	6	19.523	5	13.67	17%	30%
Moena negra	1	6.2078016	1	7.683	7	29.856	6	22.17	14%	26%
Tahuari amarillo	1	5.5543488	1	6.561254377	6	28.809	5	22.25	17%	23%
Mashonaste	4	15.87099014	4	22.91149261	27	102.617	23	79.71	15%	22%
Cumala amarilla	3	15.22902381	3	22.37681177	28	107.99	25	85.61	11%	21%
Quinilla	3	15.30641713	3	22.811319	30	130.081	27	107.27	10%	18%
Caimitillo	2	8.975582616	2	17.99688761	40	148.087	38	130.09	5%	12%
Total general	418	2849.111119	418	4575.297351						
diferencia tala versus censo		m3		1726.186232				1726.186		
diferencia en porcentaje				61%						

NEXT STEP
(ON DEVELOP)

CONTROL YIELD
(WORKER, FUEL AND ATTACHMENTS)
TRACKING AFTER HARVESTING OPERATIONS

PUERTA DEL BOSQUE

River transport

Stockyard

Sawmill

Assortment

Packing/Sell

PA10B-000001

PA10B-000001

PA10B-000001

PA10B-000001
TABLAS No

PA10B-000001
TABLAS No

TRACKING IN THE INDUSTRY

TRACKING OF TROPICAL FOREST OPERATION WITH FIELD-MAP

CONCLUSION

1. Tracking is a reliable system to allow us for tracking back the legal origin from managed forest, if it is fulfill with the requirements and duties established by the law and trusted control mechanism.
2. Field-Map is a technology to fit on forestry activities, given monitoring and tracking control of timber from forest to the industry, on real time, and we think from the industry to customer as well.
3. Recomendation to IFER, to develop a module for this application to allow the user to get at the system in straightforward way.


THANK YOU FOR
YOU KIND
ATTENTION
09 13 2016