

Sanitary logging in Ukrainian Carpathians

EXPERT REPORT
2017



Team of auditors in field

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1. LIMITATION OF THIS REPORT

Health of forest is a main subject to consider before starts thinking about the sanitary logging!

Objectivity of the health condition assessment described in this report is limited! Reasons for this statement are as follow:

- some of the visited plots have been already logged few weeks, last year or 2-3 years ago so the more precise assessment of the health condition of the forest before logging was not possible
- many signs important for assessment of appropriateness of the sanitary logging are closely linked to the health condition of the trees (e.g. logs and **leaves**, insects and fungi living under the bark, colour and **health condition** of leaves or needles, etc.). All these signs are gone after logging and after the timber is taken out of the forest
- the judgment can be done only in the certain respect and with limited preciseness based on the limited number of available signs (stumps after logging, dead wood at the ground, remnants of the recent logging operation). These signs can indirectly provide clue about health situation in the already logged forest

To overcome this challenge at least partially, also the forest stands in the immediate surroundings were inspected during the site assessment.



Health of forest is a main subject to consider...

2. INTRODUCTION

Sanitary logging is forestry operation with the main objective to solve the healthy problem of the particular forest stand. Timber and economical benefit is not the prime objective!

2.1. What is sanitary logging

Sanitary logging is standardized management tool to manage economical forest (forest producing timber for commercial use) under certain legal condition (e.g. Forest Law, Nature Conservation Law, Water and Soil Protection Law, Environment Law, Wildlife Protection Law, etc.).

To correctly assess every specific situation is necessary to consider this complex legal framework and carry out the cost benefit analysis. This in practical life means that forest managers should carry out the quick assessment of each case where the sanitary logging is planned. This, for example means to avoid the situation when to solve the problem with a group of dying trees in remote and inaccessible area, the sanitary operation will cause bigger damage on soil erosion (to build a forest road), on biodiversity (to damage or even killed threatened or endangered species), on water protection (to make a deep erosion line and significantly decrease water retention capacity), etc.



Logging operation requires a lot of skills

Sanitary logging is often a proper management tool when managers have to deal with situation which has an origin many times several decades ago (e.g. health problem of the spruce stands planted years ago outside of spruce natural areal). Managers have often a tendency to ignore or neglect signal lead to the sanitary logging. Forest service is many times missing system of early warning and ability to act in-time. This doesn't include only knowledge, skills and capacity for proper and in-time management measures, but also communication and interpreting activities. Complex of this knowledge, skills and capacity lead to the correct and in-time action which at the end can minimize surprises and tension between forest managers and society.

Properly planned and implemented sanitary logging is a management tool producing legally very often high-quality timber.

Sanitary logging is sometimes misused as a coverage for commercial and illegal activities. This is happening in several Central and Eastern European countries (e.g. Slovakia, Czech, Romania and also in Ukraine). The following tricks are sometimes happening: the sanitary logging is done in different areas as officially declared or it is done in different intensity as officially declared. Further on very critical misuse is that during selecting and marking trees is more focus on quality logged timber instead of real sanitary purpose.

The cost benefit analysis can provide an answer to many of the issues listed in the text above!

Simultaneously it is an important to keep in mind that sanitary logging is not proper management tool in protected areas of IUCN category Ia Strict Reserve and Ib Wilderness, but also in the core zones of IUCN categories II National Park and IUCN category V Nature Park. Nevertheless, the sanitary logging is often used as an excuse even in these areas just to get access to the attractive timber!

Sanitary logging, as a management tool, has to be used in specific situation and in specific time. For example, removing already dead trees killed by bark beetle is just aesthetic management. Even more important is that the sanitary logging is used when needed and is legal!

3. MONITORING TEAM

Dmytro Karabchuk, PhD, Senior Forest Officer in Ukraine, WWF International

Bohdan Vykhov, PhD, Forest Projects Assistant, WWF International Danube-Carpathian Program in Ukraine

Vlado Vancura, International Consultant, European Wilderness Society, Austria

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Ihor Neyko, PhD, and **Olena Kolchanova**, from Forest Research Station, Vinnitsya, Ukraine

Vasyl Gavryluk, Ukrainian National Forest University, Lviv, Ukraine



Team discussion and sharing opinions

4. MONITORING ITINERARY

Sunday 9nd July

Traveling from Liptovsky Hradok, Slovakia to Lviv, Ukraine

Monday 10nd July

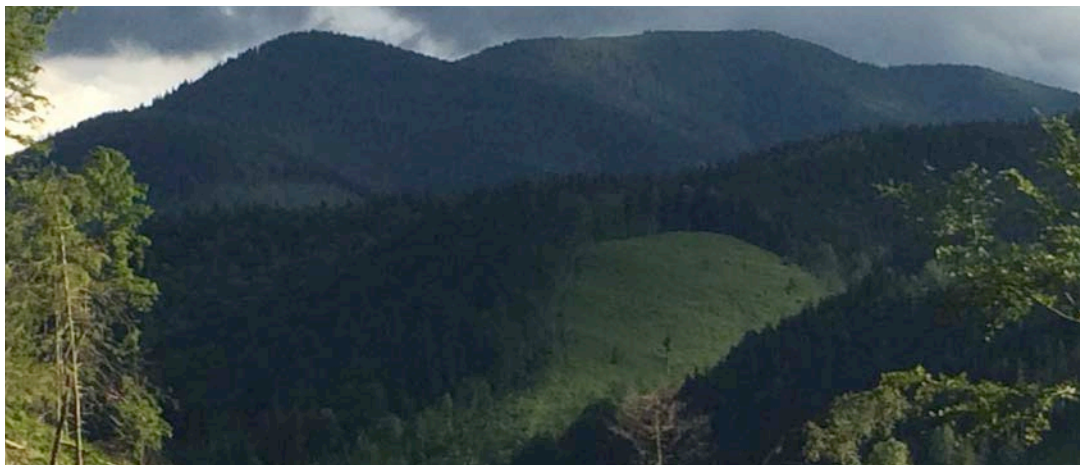
Traveling from Lviv to Forest District of Smozanske and then to Forest District Pashkivetske. Visit of two plots of State Forest Enterprise: Slavske, Forest District of Smozanske, Lvivska oblast

Tuesday 11nd July

Visit of one plot in Zakarpatska oblast, State Forest Enterprise: Volovetske, Forest District Pashkivetske

Wednesday 12nd July

Visit of two plots in Ivano-Frankivska oblast, State Forest Enterprise: Vyhodska, Forest District Maloturyanske and visit of one plot in Ivano-Frankivska oblast, State Forest Enterprise: Osmolodske, Forest District Osmolodske and traveling close to Forest District Berehometske



Carpathian conifer forest

Thursday 13th July

Visit of one plot in Chernivetska oblast State Forest Directorate: Berehometske Hunting-Forestry Enterprise, Forest District Berehometske and traveling to Kosiv

Friday 14th July

Traveling from Kosiv via Yaremche to Lviv

Saturday 15th July

Traveling from Lviv, Ukraine to Liptovsky Hradok, Slovakia

5. RESULTS OF SITE VISIT

The following plots have been assessed during field work:

Monday

Plot #: 1

Lvivska oblast

State Forest Enterprise (SFE): Slavske LH

Forest District of the SPE: Smozanske

Number: 49

Compartment # of the Forest District 10, parcel 22,7

Size: 2,1 ha

Findings:

The access to this plot is very easy. The plot is surrounded from three sides by main forest roads. There are still fragments of the standing alive forest at the plot but significant percentage of trees are already dead (either still standing or broken down).

The forest roads mean not only easy access to the plot but also significantly minimized damage of the natural revegetation due to logging operation.

After logging operation, it is necessary systematic protection of the young forest, particularly during the first years after planting so raspberry and weeds will not kill all planted trees and survived natural regeneration.

The plot was selected as one area assigned for sanitary cut this year. Surprising is that the plot was so long neglected because sanitary logging supposed to be done already several years ago.



Measurement of standing trees

Recommendation:

To clean this plot, preferably remove dead logs still commercially valuable (likely only firewood) and replanted the plot. Instead of sanitary logging use more correct title: neglected sanitary logging.

Implementing more professional logging operation approach means to

- implement final logging cut as a standardized management measure in this kind of forest
- minimized access of heavy machinery to the plot, use combination of horses, cables and tractors
- clean logging leftovers and control growth of raspberry and weeds, protect planted seedling and support spontaneous regeneration (if any survive dense bush of raspberry and weeds)
- Support in any means spontaneous natural recovery of the forest

Plot #: 2

Lvivska oblast

State Forest Enterprise: Slavske LH

Forest District: Smozanske

Number: 47

Compartment # of the Forest District 12

Size: 1,2 ha

Findings:

To access the border of this plot was constructed a new forest road. The plot is already partially logged and large part of the old forest is already removed. Introduction of the situation were done by the local forest managers.



The plot 2 is already partially logged and large part of the old forest is already removed

Dominantly the big fir was logged together with spruce and beech. Around 60% of trees were removed from the area, the left trees are younger beech, fir and spruce randomly scattered throughout the plot. The plot was already partially cleaned and the logging remnants were put on the piles.

Nicely structured old forest is all around, particularly above logged area. Despite of heavy logging operation (a lot of mechanical damage due to movement of tractors outside of forest road) the plot is still pretty well covered by young seedlings and young trees. The part of the timber on this plot was taken closer to the forest road by horses.

The plot is close to the new forest road, and so the distance to pull the timber to the loading place is short. This resulted that plot is not so heavily damaged by heavy machinery then other plots.

The signs identified during the field work indicated that the management measure on this plot was not done due to the sanitary purpose but to release a spontaneous re-generation of young seedlings (beech, fir and spruce). Due to easy terrain and good forest road nearby it could be done in a more sensitive and effective way to protect as much as possible existing young seedlings and young forest (for example also to lower the cost of the following planting activities) and protecting the soil and minimized soil erosion.

Recommendation:

Instead of sanitary logging use the more correct title: final cut as a standard management approach in this kind of forest.

Implementing more professional logging operation approach means to

- implement selecting logging

- reduce damage of the natural regeneration
- reduce damage of trunks of healthy standing trees caused by pulling logs
- better organize working place (minimized access of heavy machinery to the forest)
- better clean logging remnants and so speed up spontaneous natural recovery



The plot is already partially logged and large part of the old forest is already removed

Tuesday

Plot #: 1

Zakarpatska oblast

State Forest Enterprise: Volovetske LH

Forest District: Pashkivetske

Number: 7

Compartment # of the Forest District 6, parcel 11

Size: 3,0 ha

Dominant species: fir, spruce and beech

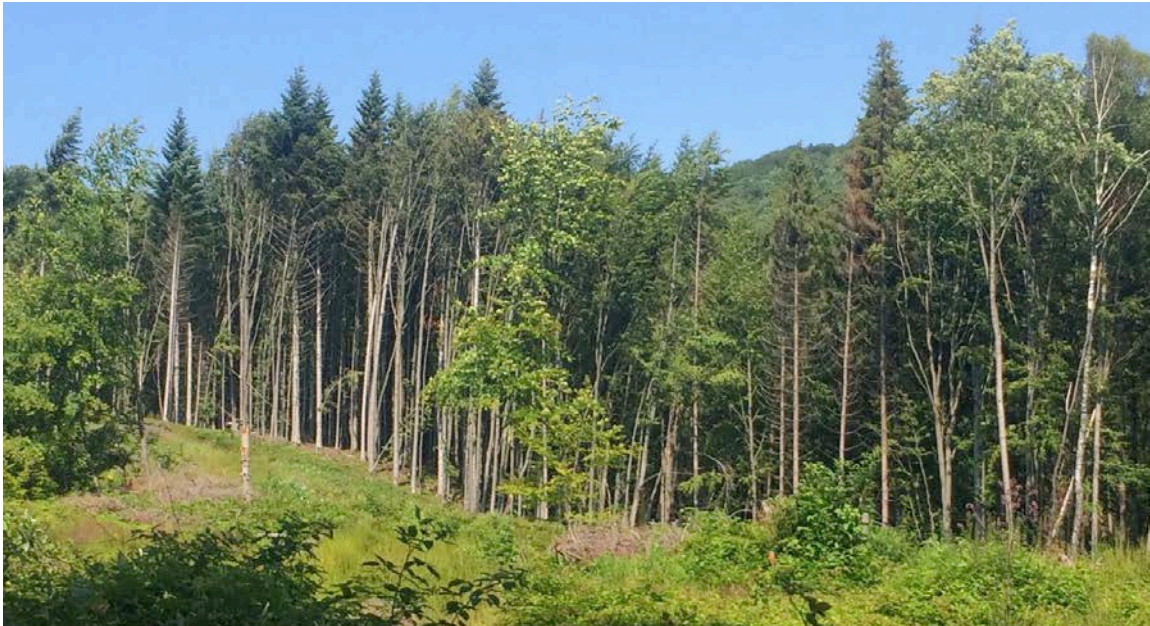
Findings:

The plot is covered by mixed forest - fir, spruce and beech.

The plot is surrounded on one sites by forest roads badly eroded in the lower part. However, the road makes access to this area and that creates better conditions for selective logging to support spontaneous re-generation.

The signs identified during the field work indicate that the management measure should not be labelled as a sanitary logging but rather selective logging as a tool to encourage and support spontaneous re-generation of beech, fir and spruce.

Due to easy terrain and good forest road nearby following management measures can be done in a very sensitive and effective way to protect as much as possible existing forest and particularly young seedlings. This approach will lead to lower the cost of the following planting activities and also minimized soil erosion.



The plot is covered by mixed forest: fir, spruce and beech

Recommendation:

Because the site assessment revealed only minimum signs relevant for the sanitary logging it is recommended to title the following activity rather selective logging as a standard management approach for forest regeneration in this kind of forest. This also will lead to gain high quality timber.

Implementing more professional logging operation approach means to

- implement selecting logging
- reduce damage of the natural regeneration
- reduce trunks damaged of healthy standing trees
- better organize working place (better clean logging leftovers and so speed up spontaneous natural recovery of the forest)
- develop more sophisticated technological plan (transport operation to decrease damage done by the timber transport)
- restore badly damaged and eroded access forest road



The badly eroded access road to the plot

Wednesday

Plot #: 1

Vyhodská oblast

State Forest Enterprise: Vyhodská LH

Forest District: Maloturyanske

Number: 51

Compartment # of the Forest District 24, parcel 22-1

Size: 3,0 ha

Dominant species: spruce, fir, beech (and also oak)

Findings:

The area is partially logged. Old forest is already removed. Introduction to the situation was done by local former forest manager. Official document said that sanitary logging happened in 2014, and it was declared as a sanitary final cut. However, the area was obviously logged in spring 2017 and according available information declared as an urgent final cut.

Nicely structured old forest all around, particularly on the south side. Dominantly the big, old spruce were logged. Around 80% of trees were removed from the area. 10% left trees are young spruce, fir and randomly also beech and oak. The logging remnants were partially cleaned and put on the piles. Due to low elevation (ca 200-300 m a.s.l.) the spruce is likely not native but planted by previous generation of foresters.



The logging remnants were partially cleaned and put on the piles

The spot is an example of badly done forestry operation with a lot of damage and soils erosion and destroying natural and spontaneous re-generation.

Logging operation in not done in very professional way (cuttings, stumps, mess and useless damage of valuable natural and spontaneous re-generation of fir and spruce). Logging focused on large dominant healthy firs and partially also on large spruce exemplars, dead trunks were just cut down and left there. Badly damaged and eroded forest road used as access to the spot and took timber down.

The signs identified during the field work indicated that the management measure on this spot is not sanitary final cut to release of spontaneous re-generation of spruce, beech and oak but rather standardized final cut with a focus to gain as much as possible high-quality timber. This operation was done in a way to badly damaging young forest stand and access road!

Recommendation:

Because the site assessment revealed only minimum signs relevant for the sanitary final cut or urgent final cut it is recommended to title this activity rather standardized final cut or even better a standardized logging operation to gain high quality timber.

Implementing more professional logging operation approach means to

- implement rather selecting logging
- reduce damage of the natural regeneration
- to reduce trunks damaged of healthy standing trees
- better organize working place (better clean logging leftovers and so speed up spontaneous natural recovery of the forest)
- develop more sophisticated technological plan (transport operation to decrease damage done by the timber transport)
- restore badly damaged and eroded access forest road



Team work in field

Plot #: 2

Vyhodská oblast

State Forest Enterprise (SFE): Vyhodská LH

Forest District of the SPE: Maloturyánske

Number: 52

Compartment # of the Forest District 16, parcel 59-2

Dominant species: fir, spruce, beech

Findings:

The area is very close to the forest road and is already logged. All timber is already removed. Introduction to the situation was done by local former forest manager.

The plot was already replanted by spruce, oak and larch because the plot was heavily damaged by logging operation (large part of seedling was damaged). The logging remnants were partially cleaned and put on the piles. Due to low elevation (ca 200-300 m a.s.l.) the spruce is likely not native but planted by previous generation of foresters.

The signs identified during the field work indicated that the management measure on this spot was not done due to the sanitary purpose but to gain high quality timber and release a spontaneous re-generation of spruce, beech and fir (also oak). Due to easy terrain and good forest road nearby it could be done in a much more sensitive and effective way to protect existing young seedlings and young forest (to reduce the cost of the following planting activities and minimized soil erosion).

Nicely structured old forest all around, particularly on the south side (behind the river).

At the entry to the plots is a pile of communal waste (the road is obviously used by locals).



The logging remnants were partially cleaned and put on the piles

Recommendation:

Instead of sanitary logging use more correct title: standardized final cut or even better a standardized logging operation to gain high quality timber.

Implementing more professional logging operation approach means to

- implement rather standardized final cut
- reduce damage of the natural regeneration
- reduce trunks damaged of healthy standing trees
- better organize working place (better clean logging leftovers and so speed up spontaneous natural recovery of the forest)
- develop more sophisticated technological plan (transport operation to decrease damage done by the timber transport
-



Logging must minimize trees damage

Plot #: 3

Ivano-Frankivska oblast

State Forest Enterprise (SFE): Osmolodske LH

Forest District of the SPE: Osmolodske

Number: 31

Compartment # of the Forest District 22, parcel 13

Dominant species: fir, spruce, beech

Findings:

The plot is already logged. Old forest is already removed at the steep slope above and below freshly done forest road. In official document this measure is declared as a total sanitary logging. What actually means in practice a complete clear-cut!

Around 90% of trees were removed from the area. 10% trees left are solitary individuals expecting that these will provide seeds and help to re-generate the logged area. The logging remnants were partially cleaned and put on the piles.

Due to elevation (ca 800-900 m a.s.l.) the spruce is more and more dominant. The slopes around show up that forest with the gaining elevation is more and more dominant with the spruce and less and less presentation of beech.



The plot is already logged

The spot is an example of badly done forestry clearcutting operation with a lot damage and soils erosion. This approach also destroyed natural and spontaneous re-generation.

Logging operation was again done in not very professional way (cuttings, messy and useless damage of valuable natural and spontaneous re-generation seedlings and young forest).

Logging focused to almost complete removing of trees with a consequence of significant change of microclimatic conditions (increase frequency of extreme temperatures, change of water regime, soil erosion, etc.).

Freshly done simple forest road (forest service has a right to make their own decision where and how this kind of road is going to be built). In this case the result is badly damaged and eroded forest road cutting steep slope with thin and easily eroded soil.

There is a nicely structured old forest all around, particularly below (towards the wild river and above (towards the tree line).

The signs identified during the field work indicated that the management measure on this spot has not sanitary character but standard forestry procedure to log the timber. In this case price for this approach are damaged steep slopes, damaged small rivulet, soil erosion, zero maintenance of the forest road.

Recommendation:

Because the site assessment revealed only minimum signs relevant for sanitary logging it is recommended to title this activity rather a standardized **logging operation to gain high quality timber concentrated in one spot.**

Implementing more professional logging operation approach means to

- implement rather selecting logging
- reduce damage of the natural regeneration
- reduce trunks damaged of healthy standing trees
- implement bark beetle preventive control system (traps, pheromones)
- better organize working place (better clean logging leftovers and so speed up spontaneous natural recovery of the forest)
- develop more sophisticated technological plan (use forest cable transportation system in combination with tractors and horses to decrease damages)
- build the simple forest road in more sound manner



The road construction created sites badly eroded

Thursday

Plot #: 1

Chernivetska oblast

State Forest Enterprise (SFE): Berehometske LMH

Forest District of the SPE: Berehometske

Number: 15

Compartment # of the Forest District 15, parcel 3

Size: 11,5 ha

Dominant species: fir, spruce, beech

Findings:

Nice structured selective forest.

The spot is already partially logged (spring 2017). Logging operation done in not very professional way (cuttings, stumps, **messy** and useless damage of valuable natural and spontaneous re-generation of beech, fir and spruce. Logging focused on large dominant healthy firs and spruce exemplars, dead trunks were just cut down and left there.



Nicely structured selective forest

Badly damaged and eroded forest road used to access the spot and took timber down.

The signs identified during the field work indicate that the management measure on this spot is not sanitary logging but rather clearing of spontaneous re-generation of fir and spruce selective forest. Only few spruce stumps at the spot were attracted by inside decay but several firs impacted by cancer were left untouched at the stand.

Recommendation:

Because the site assessment revealed only minimum signs relevant for the sanitary logging it is recommended to title this activity rather selective logging as a standard management approach in this forest.

Implementing more professional logging operation approach means to

- implement rather selecting logging
- reduce damage of the natural regeneration
- reduce trunks damaged of healthy standing trees
- implement bark beetle preventive control system (traps, pheromones)
- better organize working place (better clean logging leftovers and so speed up spontaneous natural recovery of the forest)

- develop more sophisticated technological plan (use forest cable transportation system in combination with tractors and horses to decrease damages)
- build the simple forest road in more sound manner



Badly eroded forest road is used to access the spot and took timber down

6. CONCLUSION

The Ukrainian forests are quickly disappearing – claim the environmentalists and indicate the two perpetrators guilty of this situation. One reason are politicians, who have turned exploitative logging into a significant source of revenue, and the European Union, which calls for Ukraine to allow for unlimited logging, and exports of raw wood to the West, while defending the forests at home (26.09.2016).

<http://www.financialobserver.eu/cse-and-cis/no-time-to-grieve-for-forests/>

Ukraine Bans Raw Timber Exports to EU, but Smuggling Flourishes! With the forest cover of the Carpathian Mountains looking increasingly patchy, Ukraine started a total ban on exports of raw timber on Jan.1.2017.

Ukraine Business Journal, www.theubj.com

Two quotes relevant to the current situation in Carpathian Mountains in Ukraine! Two quotes relevant to the subject of sanitary logging and reason for Forest Watch /WWF with group of internal and international experts field visits to assess the planned sanitary logging sites in summer 2017.

Several randomly selected forest plots indicate that since rules for daily forest management of economical forest is getting more and more strictly controlled the 'creativity' of people involved in this business is growing.

It seems that sanitary logging is in some extend replacing standardized logging operation (forest regeneration, forest regeneration under shelter-wood, etc.), just to use different names but flow of commercial timber continues and patches of clear-cuts are still growing all over the Carpathian Mountains!



Position of plots in Ukrainian Carpathian



Every single timber on truck is measured and registered

Attachment:

Characteristics of plots:

№	Oblast	State Forest Enterprise (SFE)	Forest District of the (SPE)	Compartment № of the Forest District	Parcel № of the Compartment	X	Y
49	Lvivs'ka	Slavske LH	Smozans'ke	10	22,7	23.225114101	48.9031495902
47	Lvivs'ka	Slavske LH	Smozans'ke	12	30,1	23.1576015148	48.8937742564
7	Zakarpats'ka	Volovets'ke LH	Pashkivets'ke	6	11	22.8535663256	48.878072137
51	Ivano-Frankivska	Vyhods'ke LH	Maloturyans'ke	24	22,1	23.93813	48.91074
52	Ivano-Frankivska	Vyhods'ke LH	Maloturyans'ke	16	29,2	23.982012	48.935844
31	Ivano-Frankivska	Osmolods'ke LH	Osmolods'ke	22	13	24.020658	48.639691
15	Chernivets'ka	Berehometske LMH	Berehometske	15	3	25.2753660316	48.1319687871



Measurement and evidence are forestry methods in standardized logging operation