Ministarstvo poljoprivrede i ruralnog razvoja/ Ministry of Agriculture and Rural Development

Uprava za šume / Forest Administration

PRAĆENJE STANJA OŠTEĆENOSTI ŠUMA U CRNOJ GORI PREMA PROGRAMU ICP ZA ŠUME

(Međunarodni kooperacioni program za praćenje stanja šuma Evrope)

MONITORING THE CONDITION OF FOREST DAMAGE IN MONTENEGRO ACCORDING TO THE ICP FOREST PROGRAMME

(International Cooperative Programme on Monitoring Forest Condition in Europe)

Godišnji izveštaj za 2010. godinu

2010 Annual Report

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Podgorica, 2011.

Ministarstvo poljoprivrede i ruralnog razvoja/ Ministry of Agriculture and Rural Development

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5. Vidan Jakić- Uprava za šume

Spisak članova terenskih timova koji su učestvovali na prikupljanju podataka sa terena po abecednom redu / The list of team members who participated in collecting field data in alphabetical order:

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PREDGOVOR

U ovoj publikaciji prikazani su rezultati procjene zdravstvenog stanja šuma Crne Gore na bioindikacijskim tačkama (BIT) za Nivo I monitoringa Međunarodnog kooperativnog programa za šume (ICP Forests). Proučavanja zdravstvenog stanja su izvršena na 49 bioindikacijskih tačaka.

U okviru Konvencije UN i Evropske komisije o prekograničnom zagađenju vazduha (CLRTAP) osnovan je Međunarodni program za procjenu i monitoring uticaja vazdušnog zagađenja na šume (*International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests*) zbog preovladavajućeg mišljenja da je najvažniji uzročnik sušenja šuma vazdušno zagađenje. Međutim, od samog početka realizacije ovog Programa ubrzo je ustanovljeno da i drugi stresori (prije svega patogene gljive , štetni insekti i sl.) mogu imati podjednako značajan uticaj na sušenje šuma. Stoga je glavni zadatak ovog programa postao prikupljanje podataka o stanju šuma i njihovoj reakciji na različite uzroke stresa na nacionalnom, regionalnom i internacionalnom nivou.

U Nacionalnoj šumarskoj politici koja je usvojena od strane Vlade Crne Gore u aprilu mjesecu 2008. godine u Izjavi br.22 , predviđeni su mehanizmi za sprovođenje Monitoringa kao osnove za upravljanje i instrument kontrole rezultata gazdovanja šumama gdje odgovornost za sprovođenje ove aktivnosti je u nadležnosti Uprave za šume. Nakon obnove svoje državnosti, Crna Gora učestvuje u programu ICP Forests gdje se monitoring obavlja u skladu sa metodologijom monitoringa Međunarodnog programa saradnje (ICP Forests).

PREFACE

This publication presents the results of assessment of health condition of forests in Montenegro on bioindication plots for Level I of monitoring of International Cooperative Programme for Forests (ICP Forests). The assessment of health condition was carried out on 49 biondication plots.

International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests was established within the Convention of EU and European Commission on Long-Range Transboundary Air Pollution (CLRTAP) due to the prevailing opinion that the main cause of forest drying is air pollution. However, from the very beginning of implementation of this Programme it was clear that other stressors (primarily pathogenic fungi, harmful insects etc.) can equally significantly influence forest drying. Therefore, the main task of this Programme is to collect the data on forest conditions and forest reaction to different causers of stress at the national, regional, and international level.

The National Forest Policy adopted by the Government of Montenegro in April 2008, Statement No. 22, envisages the mechanisms for carrying out the Monitoring as a basis for management and an instrument for controlling the results of forest management, whereas the responsibility for implementing this activity falls within the competencies of the Forest Administration. After recovering its statehood, Montenegro became the participant in the programme ICP Forests where monitoring is carried out in compliance with the monitoring methodology of International Cooperation Programme (ICP Forests).

Od 2010. godine Crna Gora je dobila svoj focal centar u Podgorici i jedinstveni indentifikacioni broj zemlje (broj 80) u kordinacionom centru u Hamburgu.

Shodno članu 47 Zakona o šumama (Sl.list CG br.74/10) nadležni organ uprave (Uprava za šume) prati i procjenjuje zdravsteno stanje šuma i o tome izvještava resorno Ministarstvo i javnost. Program monitoringa je sastavni dio nacionalne strategije koja sa planom razvoja šuma je dugoročni, intersektorski dokument, kojim se konkretizuju i sprovode ciljevi i smjernice za razvoj šuma i podršku šumama, utvrđene u nacionalnoj šumarskoj politici.

Rezultati monitoringa zdravstvenog stanja šuma u ovom izvještaju su prikazani tabelarno prema grupama parametara: obavezni i fakultativni, podrškom GIS tehnologije. Na ovom, osnovnom nivou, izvršene su analize broja snimanih i oštećenih (defolijacija > 25%) stabala šumskog drveća, prema tipu zemljišta i nadmorskoj visini (na osnovu rezultata snimanja stanja kruna na bioindikacijskim tačkama). Na kraju tog procesa izvršena je digitalizacija i formiranje baze podataka prema Geografskom informacionom sistemu.

Na osnovu rezultata o stanju šuma na Nivou I monitoringa, dat je predlog dalje implementacije monitoringa, posebno uvođenja Nivoa II – Intenzivnog monitoringa u šumskim ekosistemima Crne Gore.

In 2010, Montenegro obtained its focal centre in Podgorica and a unique identification number of the country (No. 80) in the coordination centre in Hamburg.

Pursuant to Article 47 of the Law on Forests (Official Gazette of Montenegro No. 74/10), a competent administrative authority (Forest Administration) monitors and assesses the health condition of forests and informs the line Ministry and the public thereof. The monitoring programme is an integral part of the national strategy which is, along with the forest development plan, a long-term, inter-sectoral document specifying and implementing goals and guidelines for forest development and support defined in the national forest policy.

The results of monitoring of health condition of forests have been presented in this Report in tabular form by groups of parameters, obligatory and optional, with the support of GIS technology. At this, basic level, the following analyses have neen carried out: by number of recorded and damaged (defoliation > 25%) forest trees, by land type and altitude (based on the results of recording crown condition on bio indication plots). At the end of the process, the results were digitalised and the data base was set up following the geographic information system.

Based on the results of forest conditions at the Level I of monitoring, it was proposed to further implement the monitoring and introduce the Level II – Intensive monitoring in forest ecosystems of Montenegro.

Dr. Milosav Anđelić

1. Abstract

U ovoj publikaciji – godišnjem izvještaju predstavljeni su rezultati rada Ministarstva poljoprivrede i ruralnog razvoja i Uprave za šume na praćenju zdravstvenog stanja šuma u Crnoj Gori na primjernim površinama Nivoa I- ICP za šume (Međunarodni kooperacioni program za praćenje stanja šuma Evrope) u 2010 godini.

Problem sušenja ili umiranja šuma, danas, ne samo kod nas, već i u svijetu predstavlja najveći ekološki problem. Kao glavni uzročnici navedenog stanja javljaju se negativni uticaji aerozagađenja, patogena mikoflora, štetni insekti, promjena klime kao i uticaj antropogenog faktora.

Shodno međunarodnom kooperativnom programa za procjenu i monitoring efekata vazdušnog zagađenja na šume (ICP Forests), u okviru UN Konvencije o prekograničnom prenosu vazdušnih zagađenja (*Convention on Long-range Transboundary Air Pollution –CLRTAP*) od 1988. godine u Crnoj Gori vršen je monitoring kojim je praćeno stanje u okviru mreže 16 x 16 km (Level I).

Na teritoriji Crne Gore uspostavljeno je 49 bioindikacijskih tačaka. Na uspostavljenim tačkama cilj je da se obezbijedi periodičan uvid u prostorne i vremenske varijacije stanja šuma u odnosu na antropogene (naročito aerozagađivanje) i prirodne faktore stresa preko Evropske i nacionalne sistematske mreže bioindikacijskih tačaka (Nivo I);

1. Abstract

This publication – the annual report presents the results of the Ministry of Agriculture and Rural Development and the Forest Administration related to the monitoring of the health condition of forests in Montenegro on sample plots of the Level I – ICP on forests (International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests) in 2010.

Nowadays the problem of forest drying or dying is a major environmental problem not only in our country but across the world. The main causes of this problem are the negative effects of air pollution, pathogenic micro flora, harmful insects, climatic change, and influence of the anthropogenic factor.

Pursuant to the International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP forests), within the UN Convention on Long-range Transboundary Air Pollution – CLRTAP), the monitoring has been carried out in Montenegro since 1988 following the forest condition within the grid 16 x 16 km (Level I).

49 bioindication plots have been established on the territory of Montenegro. The aim is to ensure a periodical insight into spatial and time variations of forest conditions on established plots in respect of anthropogenic (especially air pollution) and natural stress factors through the European and national systematic grid of bioindication plots (Level I);

Prva procjena zdravstvenog stanja šuma u Crnoj Gori , prema ICP Forests metodologiji (nivo I), izvršena je u 1988. godine a druga 1990. godine, nakon čega nije bilo nikakvih procjena sve do 2003. godine. U svim fazama istraživanja, kod šumskog drveća analizirano je stanje kruna stabala u vezi sa biotičkim i abiotičkim uticajima na nju bez analize hemizma i ishrane zemljišta.

Od 2003. godine Crna Gora je kao država članica SRJ dobila svoj focal centar u Beogradu i jedinstveni indentifikacioni broj zemlje (broj 67) u kordinacionom centru u Hamburgu.

U Nacionalnoj šumarskoj politici koja je usvojena od strane Vlade Crne Gore u aprilu mjesecu 2008. godine u Izjavi o politici br. 22 predviđeni su mehanizmi za sprovođenje Monitoringa kao osnove za upravljanje i instrument kontrole rezultata gazdovanja šumama gdje odgovornost za sprovođenje ove aktivnosti je u nadležnosti Uprave za šume.

Donošenjem novog Zakona o šumama u decembru mjesecu 2010. godine, predviđeno je (član 47) da nadležni organ uprave (Uprava za šume) u skladu sa metodologijom monitoringa Međunarodnog programa saradnje (ICP), prati i procjenjuje zdravsteno stanje šuma i o tome izvještava Ministarstvo i javnost. Program monitoringa je sastavni dio nacionalne strategije koja sa planom razvoja šuma predstavlja dugoročni, intersektorski dokument, kojim se konkretizuju i sprovode ciljevi i smjernice za razvoj šuma i podršku šumama, utvrđene u nacionalnoj šumarskoj politici.

The first assessment of the health condition of Montenegrin forests, under ICP Forests methodology (Level I), was performed in 1988, whereas the second one was performed in 1990. Afterwards, no assessment was performed until 2003. In all phases of research, the condition of crowns of forest trees was analysed in respect of biotic and abiotic influences, without analysing soil chemistry and nutrition.

In 2003, Montenegro as a member state of the FRY obtained its focal centre in Belgrade and the unique identification number of the country (No. 67) in the coordination centre in Hamburg.

The National Forest Policy adopted by the Government of Montenegro in April 2008, Statement No. 22, envisages the mechanisms for carrying out the Monitoring as a basis for management and an instrument for controlling the results of forest management, whereas the responsibility for implementing this activity falls within the competencies of the Forest Administration.

The new Law on Forests adopted in December 2010 envisages (pursuant to Article 47) that a competent administrative authority (Forest Administration) monitors and assesses the health condition of forests and informs the line Ministry and the public thereof, in compliance with the monitoring methodology of International Cooperative Programme (ICP). The monitoring programme is an integral part of the national strategy which is, along with the forest development plan, a long-term, inter-sectoral document specifying and implementing goals and guidelines for forest development and support defined in the national forest policy.

2. Uvod

Površina Crne Gore iznosi 13812 km^2. Od sjevera prema jugu, dužina teritorije Crne Gore vazdušnom linijom iznosi 193 km dok je od zapada prema istoku 166 km. Njena najjužnija tačka nalazi se na ušću Bojane u Jadransko more, a najsjevernija na obroncima planine Kovač, blizu Čajniča. Najzapadnija tačka je, 18º26' E, podgorina Orjena blizu sela Vrbanje, i najistočnije tačke 20º21' E, Sjenova planina istočno od Rožaja. Geografski centar nalazi se u području izvorišta rijeke Morače od kojeg ni jedan dio Crne Gore, osim najjužnijeg dijela Ulcinjskog primorja, nije udaljen više od 90 km.

Kopnene granice Crne Gore duge su 614 km. Najduža je granica prema Bosni i Hercegovini – 225 km, odnosno 36,6% ukupne kopnene granice, a najkraća prema Hrvatskoj na zapadu – 14 km ili 2,3% ukupne kopnene granice. Na jugoistoku Crna Gora se graniči sa Albanijom (172 km ili 28%), a na sjeveroistoku i istoku sa Srbijom (203 km ili 33,1%). Na jugozapadu Crna Gora dužinom od 293,5 km izlazi na Jadransko more. Taj priobalni dio mora, uz međunarodne vode, čini granicu sa Italijom, a površina morskog akvatorija iznosi oko 2.540 km^2.

2. Introduction

Montenegro is 13812 km^2 in area. From the north to the south the territory of Montenegro is 193 km in length as the crow flies, whereas from the west to the east its length totals 166 km as the crow flies. The southernmost point is located at the mouth of river Bojana in the Adriatic sea, whereas the northernmost point is located on the slopes of the mountain Kovac, in the vicinity of Cajnic. The westernmost point, 18º26' E, is the slope of mountain Orjen, in the vicinity of village Vrbanja, whereas the easternmost point, 20º21' E, is Sjenova mountain located east of Rozaje. The geographical centre is located on the territory of the source of the river Moraca, from which no part of Montenegro is distant more than 90 km, excluding the southernmost part of the Ulcinj part of the coast.

Land boundaries of Montenegro are 614 km in length. The longest boundary is the one with Bosnia and Herzegovina – 225 km or 36,6% of the overall land boundary. The shortest boundary is the one with Croatia in the west – 14 km or 2,3% of the overall land boundary. In the south-east Montenegro is bordered by by Albania (172 km or 28%), and in the north-east with Serbia (203 km or 33,1%). In the south-west Montenegro exits to the Adiatic sea (293,5 km). This inshore part of the sea, along with international waters, makes a boundary with Italy, and the area of the sea surface totalls app. 2.540 km^2.

2.1 Geografske karakteristike

Na sjeveru države dominiraju visoke planine, u središnjem dijelu se nalazi predio karsta sa većim depresijama/ravničarskim površinama, dok se uz morsku obalu proteže priobalna ravnica širine od nekoliko stotina metara do nekoliko kilometara.
Najniži dio središnjeg kopnenog dijela su doline rijeka Zete i donjeg toka Morače koje čine Zetsko-bjelopavlićku ravnicu sa Skadarskim jezerom – najvećim jezerom na Balkanu. Planinski lanci na sjeveru imaju 37 vrhova sa visinom iznad 2.000 m. U sjevernom planinskom regionu se nalazi i najdublji kanjon u Evropi – kanjon rijeke Tare sa dubinom do 1.300 m.

2.2. Klima

Južni dio Crne Gore i Zetsko-bjelopavlićka ravnica su oblasti mediteranske klime, koju karakterišu duga, vrela i suva ljeta i relativno blage i kišovite zime. Centralni i sjeverni dio zemlje imaju određene karakteristike planinske klime, ali je evidentan i uticaj Sredozemnog mora. Krajnji sjever ima kontinentalni tip klime, koji osim velikih dnevnih i godišnjih amplituda temperature karakteriše mala godišnja količina padavina uz prilično ravnomjernu raspodjelu po mjesecima.
Prosječne godišnje temeprature vazduha kreću se od oko 15.8^0 C na jugu do 4.6^0 C na Žabljaku. Godišnje trajanje grijanja sunca na primorju iznosi od 2.400 do 2.600 časova, a u planinskim krajevima od 1.600 do 1.900 časova. Godišnja količina padavina je veoma neravnomjerna i kreće se u rasponu od oko 800 mm na krajnjem sjeveru, do oko 5.000 mm na krajnjem jugozapadu. Na padinama Orjena u mjestu Crkvice (940 m nadmorske visine) u rekordnim godinama padne i do 7.000 mm

2.1. Geographical characteristics

The north of the country is dominated by high mountains, the middle part is dominated by the area of karst with larger depressions/valleys, whereas in the coastal region there is a coastal valley of the width from several hundreds of meters to several kilometers. The lowest middle part of the country is the valley of the river Zeta and the lower part of the Moraca river, which comprise Zetsko-bjelopavlicka valley together with the lake Skadar.– the greatest lake in the Balkans. Mountain ranges in the north have 37 summits above 2.000 m. In the northern mountain region, there is the deepest canyon in Europe – the canyon of the river Tara (depth: up to 1.300 m).

2.2. Climate

The Mediterrenean climate is prevalent in the south of Montenegro and the Zetsko-bjelopavlicaka valley (long, hot and dry summers, and relatively mild and rainy winters). The central and northern parts of the country have certain characteristics of the mountain climate, but the influence of the Mediterranean Sea is obvious. In the extreme north the continental type of climate prevails (apart from great daily and annual fluctuations in temperature, this type of climate is characterised by a small annual quantity of precipitation with a quite even distribution of precipitation by months). Theaverage annual air temperature ranges from app. 15.8^0C in the south to 4.6^0C in Zabljak. The annual duration of the heat of the Sun in the coastal region ranges between 2.400 and 2.600 hours, whereas in the mountain region it ranges between 1.600 and 1.900 hours. The annual amount of precipitation is very uneven, and rages between 800 mm

2.3. Namjena površina

Poljoprivredno zemljište se prostire na oko 5.145 km^2 i čini 37% ukupne državne teritorije, šume obuhvataju oko 6.225 km^2 ili 45%, dok naselja, putevi, vode, kamenjar i druge kategorije zauzimaju 2.442 km^2 ili 18% teritorije.

2.4. Vodni resursi

U Crnoj Gori postoje značajne razlike u rasprostranjenosti i izdašnosti vodnih resursa. U cjelini posmatrano, sa prosječnim godišnjim oticajem od 624 m^3/s (odnosno zapreminom od 19,67 milijardi m^3), crnogorska teritorija spada među područja koja su bogata vodom.

2.5. Šume

Šumska vegetacija se prostire na oko 620.000 ha ili 45% nacionalne teritorije, dok neobraslo šumsko zemljište zahvata 123.000 ha (9%). Stepen šumovitosti je 0,9 ha po stanovniku. Ukupne drvne zalihe procjenjuju se na oko 72 miliona m^3, od čega su 29.5 miliona m^3 ili 41% četinari, a 42.5 miliona m^3 ili 59% su lišćari.

2.6. Obalno područje

Obalno područje (šest primorskih opština) prostire se na oko 11% nacionalne teritorije. U okviru ovog regiona definisano je područje posebne namjene *morsko dobro* koje čini uzani priobalni pojas površine od oko 60 km^2 te unutrašnje vode i teritorijalno more sa ukupnom površinom od oko 2.540 km^2.

in the extreme north to app. 5.000 mm in the extreme south-west. On the slopes of the Orjen mountain, in the place called Crkvice, (altitude: 940 m) the precipitation in the record years totals up to 7.000 mm

2.3. Land purpose

Agricultural land covers app. 5.145 km^2 and makes 37% of the overall territory of the state. Forests cover app. 6.225 km^2 or 45%, whereas settlements, roads, water areas, karst, and other land categories cover 2.442 km^2 or 18% of the territory.

2.4. Water resources

Montenegro is characterised by significant differences in distribution and abundance of water resources. Viewed as a whole, with an average annual flow of 624 m^3/s (i.e. volume of 19,67 billion m^3), the territory of Montenegro can be deemed as a territory rich in water.

2.5. Forests

Forest vegetation covers app. 620.000 ha or 45% of the national territory, whereas non-wooded forest land covers 123.000 ha (9%). Forest cover totals 0,9 ha per capita. The total woody biomass is estimated at 72 million m^3: 29.5 million m^3 or 41% - conifers and 42.5 million m^3 or 59% - broadleaves.

2.6. Coastal area

The coastal area (six coastal municipalities) covers app. 11% of the national territory. Within this region there is a specific-purpose area *coastal management zone* comprising a narrow coastal belt of 60 km^2 and inland waters and territorial sea with the total area of app. 2.540 km^2 .

2.7. Životna sredina

Značajni izvori zagađenja vazduha su glavni industrijski i energetski kompleksi koji koriste stare tehnologije i po pravilu ne primjenjuju odgovarajuće mjere zaštite životne sredine. Zagađenje životne sredine od saobraćaja je u porastu, posebno u glavnim gradskim centrima. Kvalitet vazduha, ocjenjivan sa aspekta globalnih pokazatelja, je na zadovoljavajućem nivou. Za pojedine zagađujuće materije i na pojedinim lokacijama neophodno je preduzimanje mjera za sprečavanje zagađenja.

Crna Gora ima veoma bogatu floru i faunu i raznovrsne ekosisteme. Sa oko 3.250 biljnih vrsta, naša zemlja se smatra jednim od floristički najraznovrsnijih područja na Balkanskom poluostrvu, dok je indeks vrsta i površine za vaskularnu floru veoma visok i iznosi 0,837. Ukupan udio zaštićenih područja u nacionalnoj teritoriji je 9.21% i uglavnom se odnosi na pet nacionalnih parkova.

Crnu Goru danas u administrativnom smislu organizacije sačinjava 21 opština sa različitim klimatskim, orografskim, pedološkim i biološkim karakteristikama.

Zbog izražene raznovrsnostii životne sredine i klimatskih uslova, na ovoj relativno maloj površini nalazi se veliki broj biljnih vrsta.

2.7. Environment

The major industrial and energy complexes which use outdated technologies are an important cause of air pollution. Aa rule, they do not apply adequate measures aimed at environmental protection. Traffic-induced pollution is increasing, especially in the main cities. Air quality, assessed form the aspect of global indicators, is satisfactory. Undertaking measures to reduce pollution is necessary in order to deal with certain pollutants and certain locations.

Montenegro is rich in flora and fauna and various ecosystems. With app. 3.250 plant species, Montenegro is deemed as one of the most heterogenous territories on the Balkan penninsula in terms of flora, whereas the index of species and the territory of vasucal flora is very high and totals 0,837. The total percentage of protected areas compared to the overall national territory totals 9.21% and mainly includes five national parks.

In terms of administrative organisation, Montenegro is presently comprised of 21 municipalities with different climatic, orographic, pedological, and biological characteristics.

A great number of plant species grows on this relatively small territory due to heterogenity of environmental and climatic conditions.

3. Monitoring zdravstvenog stanja šuma u Crnoj Gori

Prije 27 godina na međunarodnom nivu ustanovljen je CLRTAP program (*Convention on Long-range Transboundary Air Pollution* –Konvencija o prekograničnom prenosu vazdušnih zagađenja) sa ciljem da se smanji stepen zagađenja vazduha Evrope. Ova konvencija sa programima poput ICP-a za šume koji je usvojen od većine zemalja Evrope ima za osnovni cilj smanjenje depozicije sumpora i jedan je od načina praćenja stanja vazduha i reakcije životne sredine na zagađenja na cijelom prostoru Evrope.

Praćenje stanja šuma Nivoa I programa ICP se prvenstveno odnosi na osmatranje i procjenu defolijacije i promjenu boje krune drveća na posmatranim parcelama unutar mreže 16x16 km, raspoređenim na cjelokupnoj teritoriji Crne Gore. Osmatranje se vrši prema Manualu ICP za šume.

Shodno zakonskim propisima u Crnoj Gori praćenje i procjena zdravstvenog stanja šuma i održivog gazdovanja odnosno monitoring šuma vrši nadležni organ uprave tj. Uprava za šume. Monitoring zdravstvenog stanja se vrši na osnovu godišnjeg programa monitoringa koji donosi Ministarstvo, u skladu sa strategijom razvoja šuma i šumarstva.

U pripremnom periodu, na praćenju zdravstvenog stanja šuma u Crnoj Gori uspostavljeno je na 49 bioindikacijskih tačaka u mreži 16 x16 km. Raspored postavljenih bioindikacijskih tačaka po pojedinim opštinama prikazan je grafički (slika 1) .

3. Monitoring of health condition of forests in Montenegro

The CLRTAP programme (*Convention on Long-range Transboundary Air Pollution)* was established at the international level 27 years ago in order to reduce air pollution in Europe. With programmes such as ICP Forests, which was adopted by the majority of European countries, this Convention aims to reduce the deposition of sulphur and offers the way to monitor the air quality and environmental response to pollution on the whole territory of Europe.

Monitoring of forest conditions at the Level I of the ICP programme primarily refers to observation and assessment of defoliation and change in tree crown colour on surveyed parcels distributed within the grid 16 x 16km across the whole territory of Montenegro. The survey is carried out using the ICP Forests Manual.

Pursuant to the Montenegrin legislation, monitoring and assessment of health condition of forests and sustainable management i.e. forest monitoring is carried out by the competent administrative authority – Forest Administration. The monitoring of the health condition is carried out based on the annual monitoring programme adopted by the Ministry in accordance with the strategy for developing forests and forestry.

In the preparatory period, 49 bioindication plots were established within the 16 x 16 km grid in order to monitor the health condition of forests in Montenegro. The distribition of established bioindication plots by specific municipalities was presented graphically (figure 1).

U okviru svih 49 tačaka obrađeno je po 24 stabla (ukupno 1176 stabala) na
kojima je izvršena procjena stanja kruna, promjena boje i drugih parametara na osnovu kojih je određen stepen oštećenja posmatranih vrsta. Izvršena je analiza defolijacije i dekolorizacije ukupnog broja posmatranih stabala i date su analize dominantnih vrsta sa detaljnim grafičkim prikazima uporednih analiza. Takođe je uspostavljen manual ICP za šume Crne Gore, izrađen jedinstveni softver za unos podataka, uspostavljena je procjena stanja kruna na markiranim bioindikacijskim tačkama, od strane Nacionalnog fokalnog centra dostavljeni podaci u centralnu bazu podataka u Hamburgu i uneseni podaci u GIS (geografski informacioni sistem). Rezultati, analize i trendovi procjene stanja šuma u Crnoj Gori detaljno su prikazani u narednim poglavljima.

24 trees were surveyed in each of 49 plots (1176 trees in total): crown condition, chage in colour, and other parameters based on which the degree of damage of surveyed species was determined. The total number of surveyed trees was analysed in terms of defoliation and discolouration, and dominant tree species were analysed with detailed graphical overviews of comparative analyses. Additionally, ICP Forests Manual was developed for Montenegro, as well as a unique software for data entry, crown condition on marked bioindication plots was assessed, the National Focal Centre submitted the data to the central data base in Hamburg and data were entered into GIS (geographicaloinformation system). The results, analyses, and trends in the assessment of conditions of forests in Europe are presented in detail in the subsequent chapters.

Slika 1/Figure 1.

Sistem praćenja stanja šuma u Crnoj Gori obavlja Uprava za šume uz kordinaciju sa Nacionalnim timom koji je uspostavljen rješenjem Ministra kao i jedinicom za monitoring i planiranje pri Ministarstvu poljoprivrede i ruralnog razvoja Crne Gore.

The system of forest condition monitoring in Montenegro is implemented by the Forest Administration in coordination with the national team established by the Minister decision, as well as the Central Management and Monitoring Unit under the Ministry of Agriculture and Rural Development of Montenegro.

Podaci sa bioindikacijskih tačaka moraju biti uniformi, te postoji čitav niz osnovnih zahtjeva koji moraju biti ispunjeni uz kontinuirani proces monitoringa da bi se uspješno izveo proces praćenja stanja šuma i životne sredine od pripremnih radova do konačnih rezultata. U tom kontekstu, nakon obrade rezultata, vršena je provjera podataka na terenu (5-10% uzornih tačaka), kako bi se utvrdila vjerodostojnost i analiza svih prikupljenih podataka. Provjere je vršio koordinacioni tim u skladu sa upustvima datim u Priručniku za procjenu zdravstvenog stanja, kao i aneksima tog dokumenta. Podaci sa terenskih opažanja su dokumentovani za potrebe potencijalnih domaćih i međunarodnih evaluacija. Profesionalni pristup na aktivnostima vezanim za prikupljanje i obradu ovih podataka zahtjevao je značajan vremenski angažman, naučnu i stručnu podršku, čitav niz znanja iz različitih oblasti šumarstva, mnogo napora i rada od strane šumarskih stručnjaka da bi realizovali odgovarajuće rezultate, prijedloge i rešenja u ograničenom vremenskom okviru. U tom cilju za potrebe obuke osoblja Uprave za šume sprovedena su tri kursa obuke na terenu. Obuku su vršili profesori sa Šumarskog fakulteta i Instituta za šumarstvo iz Beograda (slika 2,3).

Slika 2/Figure 2.

The data obtained from bioindication plots have to be uniform. Therefore, there is a series of basic requirements which have to be fulfilled along with the continuing process of monitoring in order to carry out successfully the process of monitoring of forest and environmental conditions from preparation works until final results. In this context, once the results had been processed, the data were verified in the field (5-10% sample plots) in order to determine their credibility and analyse all the collected data.

Verifications were carried out by the Coordination Team in compliance with instructions given in the Manual for Assessment of Health Condition of Forests and Annexes to the Manual. The data collected during the field survey have been documented for the needs of potential local and international evaluations.

The expert approach to activities related to collection and procession of these data implied a significant amount of time, scientific and expert support, expertise in different fields of forestry, a lot of effort and work of forestry experts in order to accomplish the desired results, make proposals ans solutions within a given timeframe.

For this purpose, the staff of the Forest Administration underwent three field trainings. The trainings were delivered by the professors from the Faculty of Forestry and Forestry Institute from Belgrade (Figure 2,3).

Slika 3/Figure 3.

Sprovedene obuke su vršene na terenu za različite vrste gdje je od strane eksperata vršena pokazna demostracija ocjene atributa u različitim sastojinskim uslovima. Uporedo sa tim vršena je i obuka popunjavanja odgovarajućih manuala za rad na terenu. Jedan dio obuke je obavljen na terenu neposredno na bioidikacijskim tačkama (PJ. Žabljak i PJ. Pljevlja). Na tim tačkama prezentovan je izbor i određivanje, materijalizovanje i pozicioniranje bioindikacijske površine, rad na samoj površini, izbor i obilježavanje stabala, ocjena atributa i unos podataka u predviđene obrasce.

Nakon izvršene obuke formirani su radni timovi koji su obezbijeđeni neophodnom opremom koja je sadržavala:

- kartografski materijal sa ucrtanim BIT mreže 16 x 16 km razmjere 1:25 000, kao i kartografski materijal za BIT razmjere 1:10 000 sa topografskom podlogom i 1 : 2 500 sa ortofoto podlogom,
- spisak koordinata i spisak brojeva BIT,
- Upustva i obrasci ,
- Foto vodič za ocjenjivanje zdravstvenog stanja,
- Šabloni za ispisivanje brojeva,
- Minijum farba i četkica,
- trasirke (nemagnetne, trouglaste, 2m) ,
- GPS prijemnik (sa pozicionom preciznošću 1-5 m)
- Kompas,
- Vertex i transponder ,
- pantljika/traka za mjerenje (20 ili 30m za baždarenje mjerne opreme i mjerenje rastojanja)

The trainings were delivered in the field and involved different species. The experts demonstrated the assessment of attributes in diffrent stand conditions. In parallel, tha staff were trained in filling in appropriate manuals for field work. A part of the training was delivered in the field on bioindication plots (RU Zabljak and RU Pljevlja). Selection and determination, materialisation, and positioning of a bioindication area was demonstrated on these plots, as well as the work on the very plot, tree selection and marcation, assessment of attribites, and entry of data into the prescribed templates.

After the completion of the training, working teams were appointed and supplied with necessary equipment including:

- Cartographic material with entered BIP grid 16 X 16 km scale 1:25 000, and cartographic material for BIP grid scale 1:10 000 with topographic map and scale 1 : 2 500 with ortophoto map,
- List of coordinates and list of numbers asscribed to BIP,
- Instructions and templates,
- Photo guide for assessment of health condition,
- Templates for entering numbers,
- Set of paints and brushes,
- Poles (non-magnetic, triangular, 2m)
- GPS receiver (with precision 1-5 m)
- Compass,
- Vertex and transponder,
- Measuring tape (20 or 30m for calibration of measuring equipment, and measuring distance)

- Digitalni fotoaparat,
- Dvogled,
- Metalni kočići .

Usklađivanje i poređenje podataka podignuto je na viši nivo upotrebom propisanih procedura i standarda prilikom prikupljanja podataka na terenu kao i prilikom njihove dalje obrade i dostavljanja u konačnim propisanim formama.

- Digital camera,
- Binoculars,
- Metal stakes.

Harmonisation and comparison of data has been improved by applying the stipulated procedures and standards for collection of field data and their further procession and submission in final prescribed forms.

4. Politička pozadina

4.1. Ministarske konferencije o zaštiti šuma Evrope - (MCPFE)

Od Konferencije o životnoj sredini i razvoju Ujedinjenih Nacija (UNCED), održanoj u Rio de Žaneiru 1992. godine, započeo je određen broj međunarodnih i regionalnih konferencija, inicijativa i procesa usmjerenih na održivo korišćenje prirodnih resursa. Ovi procesi rezultirali su brojnim međunarodnim obavezama i multilateralnim dogovorima koji se odnose na šume. Ministarska konferencija o zaštiti šuma u Evropi (MCPFE), kao politički proces, za posljednjih 20 godina je bila usmjerena na bolju zaštitu šuma promovišući njihovo održivo gazdovanje. MCPFE je uspostavila blisku i plodnu saradnju između evropskih vlada i brojnih interesnih strana, uključujući ekološke i ostale nevladine organizacije, asocijacije vlasnika šuma, šumarsku industriju i istraživačku zajednicu.
Na Ministarskim konferencijama, ministri odgovorni za šume u Evropi donose odluke o zajedničkim pitanjima od najviše političke važnosti za šume i šumarstvo na sve-evropskom nivou.

Od 1990. godine na pet Ministarskih konferencija (Strazbur 1990, Helsinki 1993, Lisabon 1998, Beč 2003 i Varšava 2007) usvojeno je 19 rezolucija. Preuzete obaveze raspoređene su u okviru tri stuba održivog gazdovanja šumama (*Sustainable Forest Management–SFM*) i njima se nedvosmisleno odražava želja za uspostavljanjem i održavanjem ravnoteže između ekonomske, socio-kulturne i ekološke dimenzije održivog gazdovanja šumama.

4. Political background

4.1. Ministerial Conferences on the Protection of Forests in Europe - (MCPFE)

Since the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992, a number of international and regional conferences, initiatives, and processes aimed at sustainable use of natural resources has been launched. These processes resulted in numerous international commitments and multilateral agreements related to forests. For the past 20 years, the Ministerial Conference on the Protection of Forests in Europe (MCPFE), as a political process, has been oriented toward a better protection of forests, promoting their sustainable management. MCPFE has established a close and fruitful cooperation between European governments and numerous stakeholders including environmental and other non-governmental organizations, associations of forest owners, forest industry, and research community.
At Ministerial conferences, ministers in charge of forests in Europe make decisions on common issues of major political importance for forests and forestry at the European level.
Since 1990, 19 Resolutions have been adopted at five Ministerial conferences (Strasbourg 1990, Helsinki 1993, Lisbon 1998, Vienna 2003, and Warsaw 2007). The undertaken commitments have been grouped around three pillars of sustainable forest management (SFM) and they unequivocally reflect the wish to establish and maintain the balance between economic, socio-cultural, and environmental dimension of sustainable forest management.

Svaka od održanih 5 konferencija predstavlja kontinuitet aktivnosti sa prethodnih konferencija i definiše programe rada za naredni period. MCPFE predstavlja političku inicijativu na visokom nivou, odnosno političku platformu za dijalog o pitanjima vezanim za šume Evrope. Ona se bavi opštim mogućnostima i prijetnjama koje se odnose na šume i šumarstvo i pomaže održivo gazdovanje šumama u Evropi.

Neevropske zemlje i međunarodne organizacije učestvuju kao posmatrači. Tako Konferencija obezbjeđuje, ne samo forum za saradnju ministara odgovornih za šume, nego omogućava nevladnim i međuvladinim organizacijama da doprinesu svojim znanjem i idejama.

Konferencija predstavlja dinamičan proces koji vodi računa o najvažnijim zajedničkim brigama koje se tiču šuma i šumarstva u Evropi i okreće se predstojećim izazovima. Ovaj proces se zasniva na nizu konferencija na ministarskom nivou i mehanizmima praćenja. Ministri odgovorni za šume na konferencijama se bave aspektima od najvažnijeg političkog interesa. Nakon ministarskih konferencija odluke koje su donijeli ministri dalje se razrađuju na ekspertskim sastancima.
Visoki prioritet MCPFE posvećuje temi jačanja uloge šuma u ublažavanju klimatskih promjena, posebno pitanjima snabdijevanja kvalitetnom pitkom vodom, potom poboljšanje i očuvanje biodiverziteta šuma kao i obezbeđivanje šumskih proizvoda.
Šume su ključni faktor za ostvarivanje ekoloških, zaštitnih, socijalnih i rekreacionih potreba savremenog čovjeka.

Each of the former 5 conferences proceeds with the activities initiated at the previous conference and defines work programmes for the subsequent period. MCPFE is a high-level political initiative i.e. a political platform for the dialogue about issues related to the forests in Europe. The conferences deal with general opportunities and threats to forests and forestry, and support sustainable forest management in Europe.

Non-European countries and international organisations participate as observers. Thus the Conference ensures not only the forum for cooperation of ministers in charge of forests but enables non-governmental and intergovernmental organisations to contribute by offereing their expertise and ideas.
The conference is a dynamic process which takes account of major common concerns related to forests and forestry in Europe, and is oriented toward future challenges. This process is based on a series of ministerial conferences and monitoring mechanisms. The ministers in charge of forestry deal with aspects of major political interests at such conferences. After Ministerial conferences, the decisions adopted by ministers are further elaborated in expert meetings.
A high priority of MCPFE is strangthening the role of forests in mitigating climatic changes, especially fresh water supply, improvement and conservation of forest biodiversity, as well as ensurance of supply with forest products.
Forests are a key factor in meeting environmental, protection, social, and recreational needs of modern people.

Takođe one predstavljaju važan resurs za razvoj države i to posebno ruralnih područja pružajući velike mogućnosti za razvoj lokalnih zajednica kroz iskorišćavanje primarnih i sekundarnih proizvoda šume i kroz razvoj seoskog turizma.
Šumarski sektor ima ulogu da doprinese održivom razvoju u cjelini i u saradnji sa drugim sektorima učestvuje u stvaranju situacije sa ciljem da uskladi balans između proizvodno -ekonomske, ekološke, socijalne i kulturne uloge šuma u smislu održivog razvoja. Koordinacija i partnerstvo su od ključnog značaja za promociju višekorisnih funkcija šume i održivog razvoja društva.

Drugi važni zadaci su da se razvije okvir za buduću saradnju sektora šumarstva i da istraži mogućnosti za pravno obavezujući sporazum o šumama u Evropi. MCPFE je povezan sa globalnim i drugim regionalnim procesima i inicijativama koje se bave pitanjima od najvišeg političkog i društvenog značaja u vezi sa šumama.

Additionally, they are an important resource in the development of the state, especially rural areas, by means of creating great opportunities for the development of local communities throgh the use of primary and secondary forest products and development of rural tourism.
The role of forestry sector is to contribute to sustainable development as a whole and, in cooperation with other sectors, create conditions for establishing the balance between production-economic, environmental, social, and cultural role of forests in sustainable development.
Coordination and partnership play a key role in promotion of multi-purpose functions of forests and sustainable development of society.

Other important tasks include the development of framework for future cooperation between forestry sectors and research into the possibilities of a legally binding agreement on forests in Europe. MCPFE is connected with global and other regional processes and initiatives dealing with issues of major political and social importance related to forests.

Ovakvim pristupom MCPFE prati sledeće odrednice:

- Unapređenje biološkog diverziteta u svim tipovima šuma kroz podizanje svijesti o značaju šuma i konzervaciju;
- Ukazivanje na kontinuirano i adekvatno održavanje, konzervaciju, prevođenje i stalno unapređenje biodiverziteta šuma, nacionalnih šumarskih programa i drugih politika kod ustanovljavanja mjera za ostvarivanje zajedničkog cilja i podrške ovim politikama i procesima;

By using this approach, MCPFE observes the following principles:

- Improve biological diversity in all forest types through increasing awareness of importance of forests and conservation;
- Emphasise a continuous and adequate maintenance, conservation, conversion and continuous improvement of forest biodiversity, national forest programmes, and other policies related to estabilshment of measures aimed at accomplishment of the joint goal and ensuring support to these policies and processes;

- Pristupe raznim programima i dostupnoj politici unapređenja biodiverziteta;
- Obavljanje istraživanja, analize informacija i procjene uticaja ilegalnih sječa šuma na ekonomski potencijal staništa i biodiverzitet, predlaže metode sprečavanja ilegalnih sječa kroz izgradnju kapaciteta profesionalnih ljudskih resursa za kontrolu;
- Ima ulogu razvoja regionalne saradnje i veza po principu ekološkog pristupa i održivog razvoja gazdovanja šumama;
- Analizira i prati dalji razvoj zaštićenih šumskih resursa, uzimajući u obzir osobenosti svake države i postojećeg sistema, sveobuhvatnost, tip šume i efektivnost gazovanjem tom šumom;
- Pruža doprinos pan – evropskoj strategiji za spriječavanje uticaja invazionih štetnih vrsta koje mogu da destabilizuju ili naruše ekosistem;
- Pruža novi pristup planiranju gazdovanja šumama ukjučujući i planiranje predjela kroz unapređenje pejzaža, posebno vodeći računa o održavanju, konzervaciji i obnovi šumskog biodiverziteta na predjelima gde se ističu estetske vrijednosti prirode i prirodni procesi šuma;
- Unapređenje konzervacije šumskog genetskog materijala kao sastavni i neodvojivi deo održivog gazdovanja šumama uz učešće u stalnom procesu pan – Evropske saradnje u ovoj oblasti;
- Dalji razvoj saradnje sa drugim Evropskim procesima „Životna sredina za Evropu“, programa “Okvir za saradnju“, kao i međunarodnim programom saradnje na praćenju stanja šuma“ICP za šume“.

- Provide access to different programmes and available policy of biodiversity improvement;
- Conduct research, analyse information, and assess the impact of illegal logging on economic potential of sites and biodiversity, propose the methods to combat illegal logging through the development of capacities of human resources carrying out control;
- Develop regional cooperation and connections based on environmental approach and sustainable development of forest management;
- Analyse and monitor further development of protected forest resources, taking into consideration specificities of each state and the existing system, comprehensiveness, forest type, and efficiency of forest management;
- Contribute to Pan-European strategy for combatting the impact of invasive harmful species which can destabilise or damage an ecosystem;
- Provide a new approach to forest management planning through lanscape improvement, especially taking into consideration the maintenance, conservation, and recovery of forest biodiversity on areas with dominant aesthetic properties of nature and natural forest processes;
- Improve conservation of forest genetic material as an integral and inseparable part of sustainable forest management by means of involvement in the continuing process of Pan-European cooperation in this field;
- Further develop cooperation with other European “Environment for Europe“ process, “Framework for Cooperation“ programme, as well as ICP on forests.

Ministarske koferencije o zaštiti šuma u Evropi (MCPFE), od svog uspostavljanja kao regionalni politički proces osmišljene sa ulogom unapređenja zaštite šuma budućim jačanjem održivog gazdovanja. Njihov je zadatak da uključe što više zemalja Evrope i da ih primoraju da ostvare održivi razvoj u okviru svoje državne teritorije, a u interesu cijelog Evropskog kontinenta.
Sistem je osmišljen da se globalni dogovori i ostvarena saradnja prenese na regionalni, nacionalni i lokalni nivo.

The Ministerial Conference on the Protection of Forests in Europe (MCPFE), from its establishment as a regional political process, has been envisaged to improve forest protection by future strengthening of sustainable forest management. Its task is to involve as many European countries and make them accomplish sustainable development within their territories, in the interest of the whole Europe.
Such a system envisages transposition of global agreements and estabished cooperation to regional, national, and local level.

5. Međunarodni kooperacioni program za praćenje stanja šuma – (ICP Forests)

Sa praćenjem oštećenja šumskog pokrivača intenzivno se počelo u centralnoj Evropi (Njemačka) od 1970 godine i to prvo na jeli koja je bila posebno osjetljiva na uticaj raznih stresora, a potom se program monitoringa proširio i na ostale vrste četinara. Ovaj sistem praćenja zdravstvenog stanja kasnije se razvio u internacionalni sistem sa ciljem da se u eri industrijskog razvoja stvori baza relevantnih podataka o zdravstvenom stanju šuma Evrope. Politički okvir stvoren je potpisivanjem Konvencije o prekograničnom prenosu vazdušnih zagađenja (*CLRTAP*) 1979 godine. Konvencija je stupila na snagu 1983 godine kada su polazne smjernice prihvaćene od radne grupe Evropske komisije za šumarstvo (EFC) i međunarodne organizacije za poljoprivredu i hranu (FAO), na skupu održanom u Ženevi u aprilu 1983 godine.

Zaključak ekspertske radne grupe na ovom skupu bio je da se vazdušna zagađenja i njihov uticaj na šume zemalja Evrope i Sjeverne Amerike moraju smanjiti i permanentno pratiti i tom prilikom su predložena konkretna rješenja i mjere u cilju unapređenja stanja šuma.

Konkretne osnove sadašnjeg ICP manuala za usklađeno i kontinuirano praćenje zdravstvenog stanja šuma su postavljene na sastanku Evropske komisije za šumu u Frajburgu (Nemačka) juna mjeseca 1984 godine. Prvi izvještaj o stanju šuma je usvojen 1987 na trećem sastanku ICP u gradu Usi nad Labem (Republika Češka). Taj izvještaj je baziran na procjeni stanja kruna šumskog drveća .

5. International Cooperative Programme on Forest Condition Monitoring – (ICP Forests)

The monitoring of forest cover was intensively launched in the Central Europe (Germany) in 1970 - first on the fir tree, which was particularly sensitive to influence of different stressors, and then the monitoring programme broadened so as to include the other types of conifers. This system of monitoring health condition later developed into international system intended to create a relevant data base on health condition of forests in Europe in the era of industrial development. Political framework for enabling this was created by signing the Convention on Long-range Transboundary Air Pollution (*CLRTAP*) in 1979. The Convention became effective in 1983, when the working group of the European Forestry Commission (EFC) and Food and Agriculture Organization (FAO) adopted the starting guidelines in the assembley held in Geneva in April 1983.

The conclusion of the expert group in this assembley was that air pollution and its impact on European and North American forests had to be reduced and permanently monitored. The group proposed specific solutions and measures aimed at improvement of forest conditions.

The basics of the present ICP manual for harmonised and continuous monitoring of health condition of forests were set in the assembley of the European Foresty Commission held in Freiburg (Germany) in June 1984. The first report on forest condition was adopetd in 1987 in the third assembley of ICP held in Usti nad Labem (Czech Republic). The report was based on assessment of crown condition of forest trees.

Prvi združeni izvještaj o stanju šuma Evrope pod nazivom EU/ICP je publikovan 1992 godine. Sve do 2004.godine zajednički izvještaji nisu objedinjivani kada Evropska Komisija odlučuje da izvještaje štampa kao jedinstven dokument o stanju šuma Evrope pod nazivom „Izvještaj o šumama“(ICP Forest report).

Monitoring i procjena kruna šumskog drveća širom Evrope je pod kordinacijom ICP Forest i danas i on predstavlja glavnu komponentu rada ove grupacije. Danas 42 zemlje uključujući i Sjedinjene Američke države i Kanadu (slika 4) su aktivne u okviru programa ICP za šume. 1994 Evropska komisija je donijela odredbu 1991/1994 čime je postavljena osnova za odvijanje programa Nivoa II. Danas 28 zemalja članica odvija program Nivoa II pa čak i Nivoa III, dok ostalih 14 razvija praćenje na osnovu Nivoa I. U Crnoj Gori se prećenje odvija na Nivou I, dodeljen joj je identifikacioni broj 80, kao kod pod kojim je registrovana u ICP bazi u Hamburgu i pod kojim dostavlja podatke toj instituciji.

The first joint report on condition of forests in Europe entitled “EU/ICP“ was published in 1992. Until 2004, joint reports were not published. At the time, the European Commission decided to print reports as a single document on condition of forests in Europe entitled “ICP Forest Report“.

Monitoring and assessment of forest tree crowns across Europe is coordinated by ICP Forest and nowadays it is the main component of work of this group. Presently, 42 countries including the United States of America and Canada (figure 4) take an active part within ICP Forests programme. In 1994, the European Commission adopted the Regulation 1991/1994, thus setting the basics for implementation of the programme of the Level II. Nowadays, 28 member-states implement the Level II programme, even Level III, whereas the remaining 14 countries carry out monitoring based on the Level I. The monitoring in Montenegro is carried out at the Level I. Montenegro has been assigned identification number 80 as a code under which it has been registered in the ICP base in Hamburg and under which it submits the data to this institution.

Slika 4/Figure 4.

Naučni nadzor nad praćenjem zdravstvenog stanja šuma je bio obezbjeđen i od strane „Naučne savjetodavne grupe“ od 1995 do 2002 koji je završio sa radom 2002 sa prestankom važnosti EU odredbe 3528/68. Dobra saradnja uspostavljena je sa Mrežom praćenja kisjelih depozicija istočne Azije (*Acid Deposition Monitoring Network in East Asia - EANET*).
Glavni nosioci ICP za šume su 9 ekspertskih panela (Expert Panels) i radnih grupa (Working Groups), istraživači zemalja koji učestvuju u programu, razvijaju i nadograđuju metode koje se primenjuju. Oni su takođe odgovorni za rukovođenje i nadzor nad projektima kao i za implementaciju projekata. Široka saradnja zemalja Evrope i angažovanje šumarskih eksperata država članica je garancija uspjeha ovog programa koji će u budućnosti imati još veći značaj.

Scientific supervision of monitoring of health condition of forests was carried out by the Scientific Advisory Group from 1995 to 2002, ending in 2002 with the termination of validity of EU Regulation 3528/68. A good cooperation has been established with Acid Deposition Monitoring Network in East Asia - *EANET*.
The main pillars of ICP Forests are 9 Expert Panels and Working Groups, researchers from the countries which participate in the programme, develop and upgrade the methods which are applied. In addition, they are in charge of management and supervision of projects and projects implementation. A broad cooperation between European countries and engagement of forestry experts from member states ensures the success of this programme which will have an even greater importance in the future.

5.1. Mandat, ciljevi i značaj ISP za šume

Svi stresori koji djeluju na šumsko drveće bilo da su biotičke ili abiotičke prirode ili antropogenog porijekla izazivaju određene promjene na stablima. Kompleksno djelovanje različitih zagađivača mijenja sastav vazduha i on u različitim područjima ima drugačije vrijednosti. Efekti atmosferskog zagađivanja zavise od uslova staništa i konkretne sastojine a variraju u odnosu na geografsku poziciju regiona. Sa obzirom da je ovo djelovanje trajno te da se nivo zagađivača mijenja u toku godine sezonskom pojavom vazdušnih strujanja ili se koncetracija povećava, izazivaju složene efekte na šumsko drveće koje se teško može izolovati i kvantifikovati.

5.1. Mandate, objectives and importance of ICP Forests

All stressors influencing forest trees, whether they are biotic or abiotic or of anthropogenic origin, cause certain changes on trees. A complex influence of different pollutants changes air composition and, consequently, air has different composition in different areas. The effects of air pollution vary with site conditions and specific stands, and differ in terms of geographic position of the region. Since this influence is permanent and the presence of pollutants changes during the year by seasonal appearance of air currents or their concentration increases, they complexly affect forest trees, which can be hardly isolated and quantified.

Takođe pored ovih, postoji i čitav drugi niz faktora stresa koji se međosubno nadopunjuju, nadovezuju ili poništavaju ali u svakom slučaju utiču na stanje šuma i moraju biti dodatno razmatrani i analizirani.

Mandat ICP za šume razvio se u odnosu na ove pojave u dva pravca:

- Posmatranje - mjerenje efekata antopogenog uticaja (zagađenost vazduha proizvedena djelovanjem čovjeka) i prirodnih faktora, koji utiču na stanje i razvoj šumskih ekosistema u Evropi;
- Razumijevanje uzroka i posledica u različitim šumskim ekosistemima u cilju iskorišćavanja pozitivnih i negativnih iskustava

In addition to these, there is a series of stress factors which are mutually complementary, linked, or annulled, but anyway affect forest condition and have to be additionally considered and analysed.

Having in mind these occurences, the ICP Forests mandate developed in two directions:

- Survey – measurement of effects of anthropogenic influence (human-induced air pollution) and natural factors which influence the condition and development of forest ecosystems in Europe;
- Understanding the causes and consequences in different forest ecosystems in order to take advantage of positive and negative experience.

Ciljevi ICP za šume su sledeći:

- Zahvaljujući sistematskoj mreži bioindikacijskih tačaka u cijelom regionu Evrope - omogućava periodični uvid u prostorne i vremenske varijabilnosti stanja šuma u odnosu na antropogene i prirodne faktore stresa na teritoriji svih zemalja članica;
- Doprinosi boljem razumjevanju odnosa između stanja šumskih ekosistema i faktora stresa, preko intenzivnog monitoringa u zemljama gde se vrši sistem praćenja Nivoa II;
- Ima za cilj da obezbijedi dublji uvid u interakcije između različitih komponenti šumskih ekosistema kompilacijom dostupnih informacija izvršenih proučavanja;

The objectives of ICP Forests are as follows:

- Owing to the systematic grid of bioindication plots in the whole region of Europe - ensure a periodical insight into spatial and time variations of forest conditions in respect of anthropogenic and natural stress factors on the territory of all member states;
- Contribute to better understanding of the relation between forest ecosystems condition and stress factors through intensive monitoring in countries where Level II monitoring system is carried out;
- Ensure a better insight into interactions between different components of forest ecosystems by compiling available information obtained from completed research;

- Cilj je da doprinese , u saradnji sa ICP za modeliranje i kartiranje, proračunima kritičnih ograničenja i njihovih prekoračenja u šumama i da saradnju sa drugim programima praćenja stanja u oblasti životne sredine u okviru i izvan CLRTAP;
- Na osnovu aktivnosti monitoringa da doprinese svim drugim aspektima od značaja za šumarsku politiku na svim nivoima (nacionalnom, regionalnom, evropskom i svjetskom) da pomogne da se riješe problemi vezani za promjenu klime i uspostavi održivo gazdovanje šumama i spriječi smanjenje šumskog biodiverziteta;
- Da za potrebe javnosti obezbijedi relevantne i precizne informacije i omogući donošenje značajnih odluka iz oblasti šumarstva, zaštite životne sredine i očuvanja biodiverziteta.

- In cooperation with ICP on development of field models and maps, contribute to assessment of critical constraints and their breach in forests, and establish cooperation with other programmes aimed at monitoring environmental conditions within and out of CLRTAP;
- Based on monitoring activity, contribute to all other aspects important for forest policy at all levels (national, regional, European, and world) in order to help solve problems related to climate change, establish sustainable forest management, and prevent reduction in forest biodiversity;
- Provide relevant and precise information to the public, and enable decision-making in the field of forestry, environmental protection, and biodiversity conservation of.

Da bi ciljevi ICP bili ostarivi neophodna je široka saradnja sa svim zemljama članicama uz kordiniranje i kontinuitet procesa, koja je postignuta dobro razvijenom mrežom i preciznim upustvima da bi se postigli željeni rezultati.
Unaprijeđenje postojećih mehanizama prikupljanja i obrade podataka, se postiže djelovanjem naučnih intitucija iz oblasti šumarstva kao i djelovanjem eksperata, dok se kao rezultat detaljnih analiza, brojnih ocjena i analiza dobija jasnija slika zdravstvenog stanja šuma Evrope i otkrivaju se novi načini za djelovanje protiv štetnih pojava.

In order to accomplish ICP objectives, it is necessary to establish cooperation with all member states and ensure the coordination and continuity of the process by means of well developed network and precise instructions on how to achieve the desired results.
The improvement of the existing data collection and procession mechanisms can be achieved by involvement of scientific institutions and experts in the field of forestry. The result of detailed analyses and assessments is a clearer picture of health condition of European forests and discovered new ways of acting against adverse occurences.

5.2. Nivoi intenziteta monitoringa

Da bi se ostvarili ciljevi, omogućilo konstantno praćenje stanja šuma u zemljama Evrope osmišljen je sistem koji prema tehnološkom razvoju zemlje i raspoloživim ekonomskim i kadrovskim potencijalima omogućuje svim članicama da obezbijede određeni nivo podataka neophodan za analizu i procjenu trenutnog stanja. Tako su razvijena III nivoa intenziteta monitoringa:

Nivo I – podrazumijeva praćenje stanja šuma na bioindikacijskim tačkama 16x16 km sistemske mreže – na način što se na pojedinačnim parcelama obavlja posmatranje i analiza sledećih paramentara: procjena stanja kruna (defolijacija i dekolorizacija), stanje zemljišta i ishrane šumskog drveća, prisutne bolesti i štetočine šumskog drveća i dr. Podaci koji se dobiju na ovom nivou reprezentuju najšire područje Evrope. U sledećoj tabeli predstavljen je pregled tačaka po državama učesnicama (Tabela 1) i grafički prikaz tačaka Nivoa I sa tipom šume (slika 5).

5.2. Monitoring intensity levels

In order to accomplish objectives, enable a constant monitoring of forest condition in European countries, a system has been designed to provide a certain amount of data necessary for analysis and assessment of the present condition which corresponds to available economic and human resources potentials of all member states. Therefore, there are 3 Levels of monitoring intensity:

Level I implies monitoring of forest condition on bioindication plots of 16 x 16 km systematic grid by surveying and analysing the following parameters on specific parcels: crown condition assessment (defoliation and decolorisation), land condition and forest trees nutrition, presence of deseases and pests etc. The data obtained at this level represent the widest European region. The next table shows an overview of plots by member states (figure 1) and graphical overview of Level I plots along with forest type (figure 5).

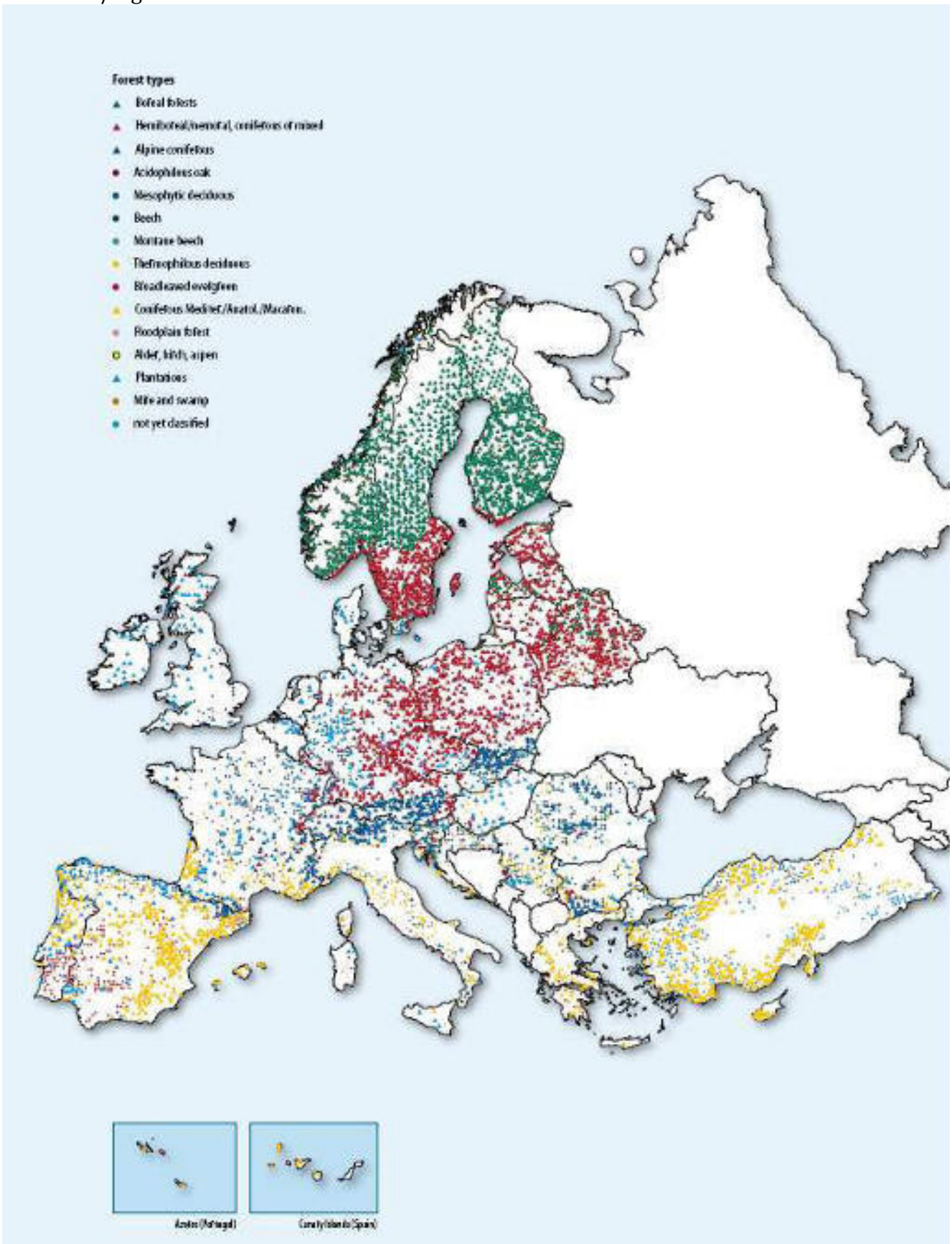
Tabela 1/ Table 1.

Forest Condition in Europe, 2011 Tehnical report ICP Forest, strana/page 19

Number of sample plots assessed for crown condition

Country	Number of sample plots assessed												
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	130	130	133	130	133	131	130	136	136				135
Azores	6	6	6	6	6	6	6	6	6				
Belgium	29	30	29	29	29	29	29	29	27	27	26	26	9
Bulgaria	134	114	108	108	88	105	103	133	97	104	98	159	140
Canarias	13	13	13	13	13	13	13	13	13	13	13		
Cyprus				15	15	15	15	15	15	15	13	15	15
Czech Republic	116	139	139	139	140	140	140	136	136	133	136	133	132
Denmark	23	23	21	21	20	20	20	22	22	19	19	19	17
Estonia	91	91	90	90	92	93	92	92	92	93	92	92	97
Finland	459	457	453	454	467	453	594	593	606	593	479	888	932
France	537	544	519	519	518	515	511	509	498	534	509	508	532
Germany	421	433	445	446	447	447	451	451	423	423	423	412	411
Greece	93	93	93	92	91			87				97	99
Hungary	59	62	63	63	63	62	73	73	73	73	72	73	71
Ireland	21	20	23	20	20	19	18	18	21	33	31	32	29
Italy	177	239	255	265	259	247	255	238	251	238	236	252	253
Latvia	97	98	94	97	97	95	94	92	93	93	92	207	207
Lithuania	67	67	67	66	66	64	63	62	62	62	70	72	79
Luxembourg	4	4	4		4	4	4	4	4	4	4		
The Netherlands	11	11	11	11	11	11	11	11	11			11	11
Poland	431	431	431	431	433	433	433	432	376	453	453	376	374
Portugal	143	143	143	144	145	136	133	119	118				
Romania	235	236	235	232	231	234	236	236	235	218		237	239
Slovak Republic	133	110	111	110	110	108	108	108	107	107	108	108	138
Slovenia	41	41	41	41	38	41	42	44	45	44		44	44
Spain	452	506	607	607	607	607	607	607	607	607	607	620	620
Sweden	764	764	763	770	769	776	776	784	790			789	830
United Kingdom	88	86	89	86	86	86	86	84	82	33			79
EU	4751	4964	4982	5004	4957	4957	6025	5112	4936	3885	3473	6147	5430
Andorra							3		3	3	3	3	3
Belarus	415	406	408	408	407	408	406	406	406	400	400	406	413
Croatia	83	84	83	81	80	79	84	85	88	83	84	83	83
Moldova	10	10	10	10									
Montenegro													49
Norway	465	461	482	408	414	411	442	460	453	476	481	482	481
Russian Fed.												465	288
Serbia						103	130	129	127	125	124	122	121
Switzerland	49	49	45	49	49	48	48	48	48	48	48	48	48
Turkey												563	555
Total Europe	5721	5916	5914	5960	5947	5933	6152	6235	6066	5222	4617	7227	7503

Slika 5/Figure 5.



Map of Level I plots, www.icp-forests.org

Crna Gora je u izvještaju od 2010 godine prikazana sa 49 tačaka gde je izvršeno procjenjivanje zdravstvenog stanja na 1176 stabala (tabela 2).

In 2010 Report, Montenegro was present with 49 plots where health condition was assessed on 1176 trees (Table 2).

Tabela 2/Table 2.

Number of sample trees from 1998 to 2010 according to the current database

Country	Number of sample trees												
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	3577	3535	3506	3451	3503	3470	3586	3528	3425				3087
Belgium	692	696	686	682	684	684	681	676	618	616	599	599	216
Bulgaria	5449	4844	4197	4174	3720	3836	3629	3592	3510	3569	3404	5560	4929
Cyprus				360	360	360	360	361	360	360	360	362	360
Czech Rep.	2899	3475	3475	3475	3500	3500	3500	3450	3425	3300	3400	3325	3300
Denmark	552	552	504	504	480	480	480	528	527	442	452	384	408
Estonia	2184	2184	2160	2136	2169	2228	2201	2167	2191	2209	2196	2202	2348
Finland	8758	8662	8576	8579	8593	8482	11210	11498	11489	11199	8812	7182	7946
France	10740	10883	10317	10373	10355	10298	10219	10129	9950	10074	10138	9949	10584
Germany	13178	13466	13722	13478	13534	13572	13741	13630	10327	10241	10347	10088	10063
Greece	2204	2192	2192	2168	2144			2054				2289	2311
Hungary	1383	1470	1488	1469	1446	1446	1710	1662	1674	1650	1661	1668	1626
Ireland	441	417	420	420	424	403	400	382	445	646	679	717	641
Italy	4939	6710	7128	7350	7165	6866	7109	6548	6936	6636	6579	6794	8338
Latvia	2326	2348	2256	2325	2340	2293	2290	2263	2242	2228	2184	3911	3898
Lithuania	1616	1613	1609	1597	1583	1560	1487	1512	1505	1507	1688	1734	1814
Luxemburg	96	96	96		96	96	96	97	96	96	96		
Netherlands	220	225	218	231	232	231	232	232	230			247	227
Poland	8620	8620	8620	8620	8660	8660	8660	8640	7520	9160	9036	7520	7482
Portugal*	4470	4470	4470	4500	4530	4260	4170	3740	3719				
Romania	5637	5712	5640	5568	5541	5541	5424	5496	5472	5232		5448	5736
Slovak Rep.	5094	5063	5157	5054	5076	5116	5058	5033	4808	4904	4956	4944	4831
Slovenia	984	984	984	984	936	983	1006	1056	1069	1056		1056	1052
Spain**	11160	14664	14880	14880	14880	14880	14880	14880	14880	14880	14880	14880	14880
Sweden	11044	11135	11361	11283	11278	11321	11255	11422	11186			2207	2742
United Kingdom	2112	2039	2136	2064	2064	2064	2040	2016	1968	768			1803
EU	110275	115555	115798	115725	115296	112633	115424	116601	109572	90773	81367	93066	100612
Andorra							72		74	72	72	73	72
Belarus	9896	9745	9763	9761	9723	9716	9682	9484	9573	9424	9438	9615	9617
Croatia	2066	2015	1991	1941	1910	1869	2009	2046	2109	2013	2015	1991	1992
Moldova	234	259	234	234									
Montenegro													1176
Norway	4009	4052	4051	4301	4441	4547	5011	5319	5525	5824	6085	6011	6330
Russian Fed.												11016	8958
Serbia						2274	2915	2995	2902	2860	2788	2751	2786
Switzerland	868	857	855	834	827	806	748	807	812	790	773	801	795
Turkey												13219	12985
Total Europe	127408	132483	132692	132799	132200	131845	135864	137252	130367	111756	102538	138546	145324

* including Azores, ** including Canares

Forest Condition in Europe, 2011 Tehnical report ICP Forest, strana 22/page 22

Nivo II predstavlja intenzivni monitoring na određenom broju stalnih oglednih površina. Na nivou II istraživanje i praćenje je detaljnije i obrađuje se veliki broj ulaznih parametara. Do sada je postavljeno 860 stanica za praćenje nivoa II. Rezultati nivoa II imaju detaljnije pokazatelje, ali im nedostaje široka rasprostranjenost nivoa I pa se oni koriste u vezi sa nivom I i takvim upoređivanjem i upotrebom dobijaju još više na značaju. Raspored tačaka Nivoa II na području Evrope prikazan je na (slici 6).

Level II implies an intense monitoring on a certain number of permanent sample plots. At Level II, research and monitoring is more detailed and a great number of inflow parameters is processed. Up to date, 860 plots have been established for monitoring Level II. The Level II results are characterised by more detailed indicators but they lack a wide distribution of Level I. Therefore, they are used in connection with Level I and by such a comparison and use they gain an increasing importance. The distribution of Level II plots in Europe is presented in figure 6.

Slika 6/Figure 6.

Map of Level II plots, www.icp-forests.org

Na ovaj način preko nivoa II ostvaruje se:
- procjena značaja uzajamnih veza na Evropskom nivou;
- ograničavanje geografskog područja (u okviru Evrope) gdje su se ove veze pokazale tačnim.

Preduslov za upotrebu različitih nivoa je usaglašavanje nivoa i njihovih preklapanja. Nivo III predstavlja najviši hijerajhijski intenzitet monitoringa. Na nivou III se vrši sagledavanje i ispitivanje kompleksnih veza i uzajamnog djelovanja različitih pojava u šumskim ekosistemima, polazeći od objavljenih rezultata naučnih istraživanja i rezultata monitoringa dobijenih aktivnosti koje prevazilaze nivo II. Takođe je i kod nivoa III ispunjen preduslov povezanosti sa nižim nivoima I i II.

In this way, Level II ensures:
- assessment of importance of interconnections at the European level;
- limitation of a geographic area (within Europe) where these connections turned to be correct.

The precondition for applying different levels is to harmonise levels and determine their overlaps.
Level III implies the greatest monitoring intensity in the hierarchy. At Level III, complex connections and interaction between different occurences in forest ecosystems is surveyed and researched, building on the published results of scientific research and monitoring results of activities surpassing Level II. Level III implies the fulfillment of the precondition of establishing connection with lower levels I and II.

5.3. Aktivnosti monitoringa za Nivo I

Na teritoriji Evrope je ustanovljena je mreža sa više od 7500 bioindikacijskih tačaka za praćenje zdravstvenog stanja šuma i njihove prostorne i vremenske promjene u toku jednogodišnjeg ciklusa. Mreža daje statistički dovoljno precizne podatke i pokriva različite šume na nivou Evrope. Pojedine zemlje u cilju dobijanja preciznijih podataka razvile su mrežu od 4x4 km da bi dobili preciznije podatke o stanju šuma na svojoj teritoriji kao i na regionalnom nivou. Mreža Nivoa I sadrži 7503 parcele monitoringa (bioindikacijskih tačaka) zaključno u 2010 godini, sistematski raspoređenih u mreži 16 x 16 km širom Evrope.

5.3. Level I monitoring activities

The grid of more than 7.500 bioindication plots has been established on the territory of Europe in order to monitor the condition of forest health and changes associated with space and time during a one-year cycle. The grid provides sufficiently precise statistical data and covers different forests on the territory of Europe. In order to obtain more precise data on forest condition on their territory and at the regional level, certain countries developed a 4 x 4 km grid. The Level I grid contains 7.503 monitoring parcels (bioindication plots), including 2010, systematically distributed within the 16 x 16 km grid across Europe.

U okviru Nivoa I, sprovode se sledeća proučavanja:

- **procjena stanja kruna** (crown condition assessment), godišnje;
- **hemizam zemljišta** (soil chemistry), svake 10. godine;
- **folijarne analize** (foliar composition), fakultativno.

The following surveys are carried out within Level I:

- **Crown condition assessment**, annually;
- **Soil chemistry,** every 10 years;
- **Foliar composition,** optional.

Ciljevi

Najznačajniji cilj nivoa I jeste pružanje periodičnog pregleda prostornih i vremenskih varijacija kod stanja šume u odnosu na antropogene i prirodne faktore stresa u evropskoj i nacionalnoj sveobuhvatnoj sistematskoj mreži.

Stanje kruna šumskog drveća predstavlja najbolji pokazatelj pozitivnih ili negativnih efekata kako biotičkih tako i antropogenih uticaja na stanje šuma. Krune šumskog drveća mogu biti u različitoj mjeri oštećenje djelovanjem štetočina ili patogenih gljiva. Svi uzročnici se prate prema ustanovljenoj metodologiji i time se omogućuje bolje razumijevanje njihovog uticaja na pojedine vrste ili tipove šume, učestalost javljanja i prostorna raspoređenost.
Istraživanje zemljišta trebalo bi da u prvom redu pruži informacije o promjeni hemizma u zemljištu, i izvrši procjenu kvaliteta zemljišta po različitim slojevima u okviru bioindikacijskih tačaka. Rezultate stanja kruna zajedno sa istraživanjem zemljišta moguće je uporediti zahvaljujući uzajamnim jakim korelacijama ovih pojava i izvesti zaključke da li je stanje šuma rezultat lokalne zagađenosti zemljišta, šteta izazvanih lokalnim faktorom stresa ili je pojava zabilježena širom Evrope kao rezultat povećanja zagađenosti na širem regionu.

Objectives

The most important Level I objective is providing a periodical overview of spatial and time variations in forest conditions considering anthropogenic and natural stress factors in the European and national comprehensive systematic grid.

Forest trees crown condition is the best indicator of positive or negative effects of both biotic and anthropogenic influence of forest condition. Forest tree crowns can be damaged by pests or pathogenic fungi to a different extent. All the causes are monitored using the established methodology, thus enabling a better understanding of their influence on specific species or forest types, frequency of occurence, and spatial distribution.
The research into land should primarily provide information on the change in soil chemistry and assess land quality by different layers within bioindication plots.
The results of crown condition analysis and the results of land research are possible to compare owing to strong corelations between these occurences. Additionally, it is possible to make conclusions if forest condition is the result of a local land pollution, or damage caused by local stress factor, or if it is an occurrence noted across Europe resulting from increased pollution in a wider region.

Hemijske Analize ishrane šumskog drveća imaju za cilj da obezbijede informaciju o statusu mineralne ishrane šumskog drveća na bioindikacijskim tačkama kao i o hemijskom sastavu asimilacionih organa biljke i mogu pokazati pojavu ili deficit različitih hranjivih materija koje su nastale kao rezultat djelovanja polutanta na šumsko drveće, a uzimajući u obzir i promjene na šumskom zemljištu i pojave na krošnji drveća.

Prikupljeni podaci se po uspostavljenoj proceduri posle obrade dostavljaju svake godine glavnom koordinatnom centru za praćenje stanja šuma sa sedištem u Hamburgu u Nemačkoj (*RCC of ICP Forest – Programme Coordinating Center*).

Chemical analyses of forest tree nutrition aim to provide information on the status of mineral nutrition of forest trees on bioindication plots and the chemical composition of assimilation parts of a plant, and can show the sufficiency or deficit in different nutritional substances resulting from the influence of pollutants on forest trees, and also taking into consideration changes on forest land and occurences on tree crowns.

After they have been processed, the collected data are submitted annually to the main Coordinating Centre for monitoring forest condition with its headquarters in Hamburg, Germany (*RCC of ICP Forest – Programme Coordinating Center*).

5.4. Metodi i kriterijumi

U centru svake BIT, prema kordinatnoj mreži koja je uspostavljena na teritoriji Crne Gore, određuje se u prostoru, bioindikacijska parcela gdje će se vršiti istraživanje i procjena stanja kruna šumskog drveća i u centru te tačke se postavlja metalna šipka jarke boje (Slika 7,8).

Slika 7/Figure 7.

5.4. Methods and criteria

In the center of each bio indication plot, according to the grid that had been established for the teritorry of Montenegro, bio indication parcel shall be established within the area where research and assessment of forest trees crown shall be performed, and within the center of that plot we shall place the metal pole of bright color (Figure 7,8).

Slika 8/Figure 8.

Uzorci drveća za procjenu stanja kruna sistematski se biraju kao klaster od 4 mjesta (Slika 9). U smjeru četiri glavne strane svijeta na udaljenosti po 25 m od centralnog mjesta – šipke, odabira se po šest najbližih stabala (ukupno 24 stabla), koja se definišu kao uzorci za procjenu.

Uzorci drveća podrazumijevaju sve vrste drveća, pod uslovom da im je visina preko 60 cm. Klase pokrovnosti, određuju se prema sistemu Krafta (dominantna, kodominantna, subdominantna, potištena i umiruća (slika 10), određuju stabla koja se uzimaju u obzir za procjenu, ali vodeći računa da su izabrana stabla bez značajnih mehaničkih oštećenja.

Izabrana stabla trajno se označavaju brojevima za buduće stalne godišnje procjene. Stabla koja su uklonjena zbog mjera gazdovanja ili iz nekih drugih razloga, zamjenjuju se novim odabranim stablima. Ukoliko se sastojina ukloni čistom sječom, ili sječom na većoj površini ostavlja se centralna tačka do podizanja nove sastojine.

Stalna ogledna površina nazvana je bioindikacijska tačka. Sastoji se od centra, koji je određen na osnovu koordinata i na terenu je obilježen metalnom šipkom u skladu sa statistički usvojenom procedurom, koja obuhvata princip slučajnog izbora.

Na 25 metara od centra, a u pravcu četiri glavne strane svijeta određene su ogledne površine, na kojima je izdvojeno po 6 stabala koja su obeležena brojevima od 1 do 6 kao na primjeru na slici 9.

Tree samples for assessment of crown status shall systematically be selected as cluster having 4 places (Figure 9). In the direction of four main cardinal points at distance of 25 m from the central place – pole, we shall select six closest trees (total of 24 trees), which shall be defined as assessment samples.

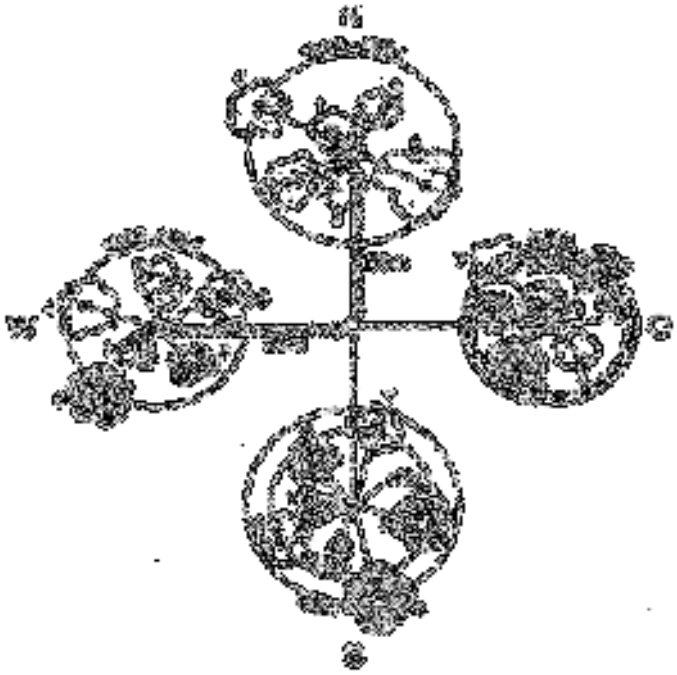
Tree samples imply all tree species, provided their heights are above 60 cm. Classes of coverage shall be defined by Kraft system (dominant, co-dominant, sub-dominant, sullen and dying (Figure 10), and shall classify the trees to be taken into account for assessment, but taking care that the selected trees do not have any significant mechanical damages.

Selected trees shall permanently be marked by numbers, for purposes of future permanent annual assessments. Trees that have been removed because of the management measures or any other reasons, shall be replaced by new selected trees. If the stand is removed by clear felling, or felling in a larger area the central plot shall be left until the new stand is planted.

Permanent sample plot has been named bio indication plot. It consists of the center, identified on basis of coordinates and marked in the field by metal pole, in accordance with the statistically adopted procedure including the principle of raqndom selection.

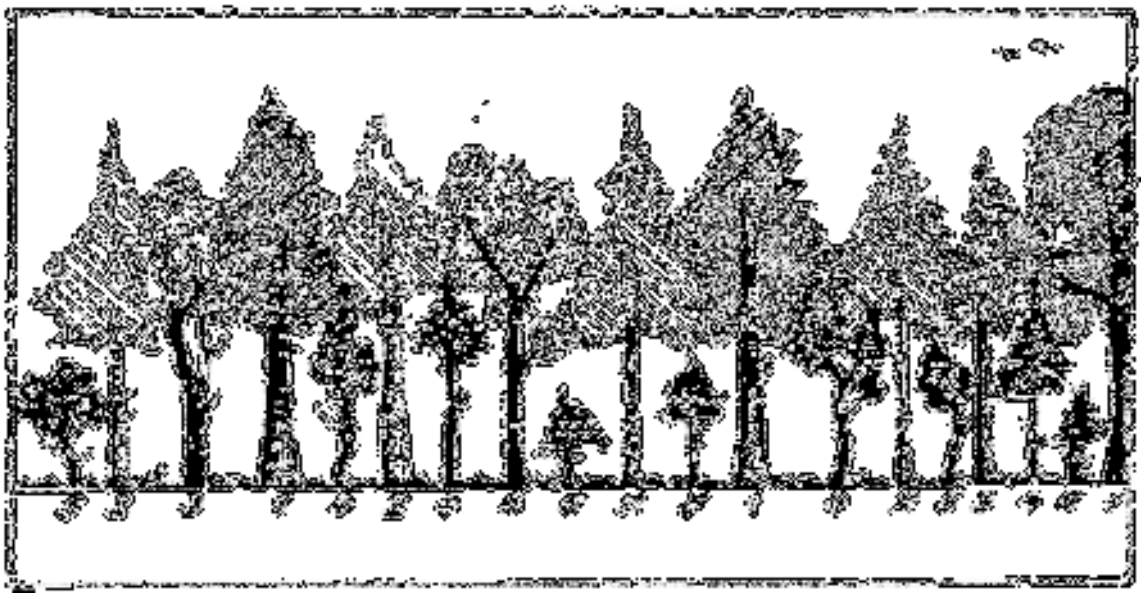
Sample plots have been defined at 25 meters from the center, and into the direction of four principal cardinal points, where we have singled out 6 trees in each of them, numbered from 1 to 6, as in the example shown in Figure 9.

Slika 9/Figure 9 .



Prikaz BIT – klastera sa 4 mesta sa 6 stabala i primjerom izmeštanja uzoraka drveća / Overview of Bio - indication plot – clusters from 4 places having 6 trees and example of displacing tree samples.

Slika 10/Figure 10.



Klase pokrovnosti kruna po Kraftu: 1.dominante, 2. kodominantne, 3. subdominantne, 4. potištene, 5. umiruće / Classes of crown coverage by Kraft: 1. dominant, 2. codominant, 3. subdominant, 4. sullen, 5. dying

5.4.1. Stanje kruna

U okviru istraživanja (Nivo I) stanje kruna se izražava klasama gubitka lisne mase, promjene boja i kombinovanim klasama oštećenja. Drveće sa više od 50 % mehaničkih oštećenja u kruni se isključuje iz procjene. Uticaj svih postojećih ili odsutnih (uklonjenih) stabala na krošnju se mora uzeti u obzir prilikom utvrđivanja njenog stanja. U slučajevima kada je uzorna krošnja stabla pod uticajem konkurencije, krošnja koju je moguće ocijeniti obuhvata samo djelove koji nijesu pod uticajem drugih krošnji, npr. zasjena (da li je u sklopu ili osami) bez obzira na uzrok sadašnjeg stanja (slika 11).

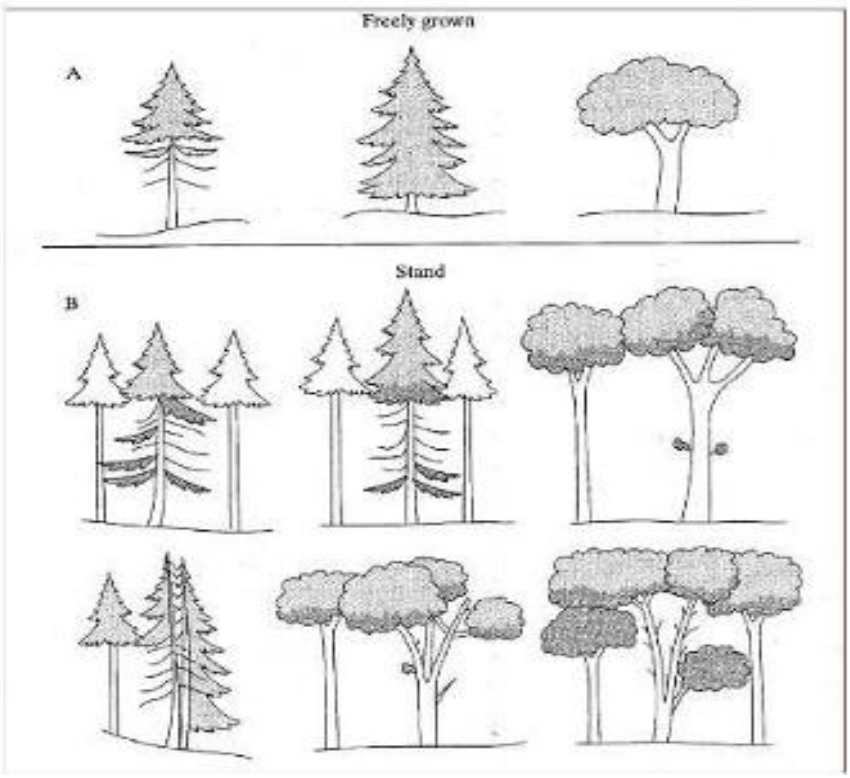
Djelovi krošnje, koji su pod direktnim uticajem interakcija između krošnji ili konkurencije, se izostavljaju.

Slika 11/Figure 11 .

5.4.1. Crown status

Within the research (Level I) crown status shall be expressed by classes of leaf mass loss, changes in colors and combined damage classes. Trees having more than 50 % of mechanical damages within the crown shall be excluded from the assessment. Impact of all the existing or absent (removed) trees on the crown will have to be taken into account when identifying its status. In cases when sample tree crown is under the competition's impact, the crown which is possible to evaluate shall include only those parts that are not under the impact of other crowns, e.g. shading (whether within the compound or in solitude) regardless to the cause of current condition (Figure 11).

Parts of the crown that are under the direct impact of interactions between the crowns or competition shall be left out.



Izgled stabala raslih na osami i sklopu, Manual, Visual Assessment of Crown Condition, strana 10 / Layout of trees grown in solitude or within the compound, Manual, Visual Assessment of Crown Condition, page 10

5.4.2. Defolijacija

Defolijacija se procjenjuje u intervalima od 5 % i grupiše se u 5 klasa nejednakog opsjega (tabela 3). Stabla koja se izvale pod uticajem vjetra ili dođe do loma krošnje zamjenjuju se drugim da bi se obezbjedio minimalan broj stabala za procjenu.

Definicija

Defolijacija se definiše kao gubitak iglica / lišća u krošnji koja se može ocjenjivati u odnosu na referentno stablo. Vrši se ocjena defolijacije bez obzira na uzrok gubitka lišća (odnosno, na primjer, obuhvata oštećenja koja izazivaju insekti).

Defolijacija može obuhvatiti tanke krošnje nastale zbog nedostatka lišća, imajući u vidu da je možda nemoguće odvojiti ovo od istinske defolijacije. Ovo je jedna od standardnih ocjena koje se vrše na nivou I.

5.4.2. Defoliation

Defoliation shall be assessed at intervals of 5 % and shall be grouped in 5 classes of unequal scope (table 3). Windthrown trees or those with crown fractures shall be replaced by other ones in order to provide minimum number of trees for assessment.

Definition

Defoliation shall be defined as loss of needles / leaves within the crown that can be evaluated by comparison with the reference tree. Evaluation of defoliation shall be performed regardless to the cause of loosing leaves (that is, for example, shall include damages caused by insects).

Defoliation may include thin crowns incurred because of the deficiency of leaves, bearing in mind it might be impossible to distinguish this from genuine defoliation. This shall be one of the standard evaluations being performed at Level I.

Tabela 3/Table 3.

Klasa / Class	**Defolijacija / defoliatium**	**Procenat gubitka iglica / lišća / Needle /leaf losss %**
0	nema / none	0 – 10%
1	slaba (upozoravajuća) / slight	>10 – 25%
2	srednja / moderate	> 25 – 60%
3	jaka / severe	> 60 – 100%
4	suva stabla / dead	> 100%

Klase defolijacije prema UN/ECE i EU klasifikaciji/ Defoliation classes according to the UN/ECE and EU classification

5.4.3. Dekolorizacija

Promjena boje lišća (dekolorizacija) važan je dijagnostički indikator stanja kruna i može se procijeniti prema klasama navedenim u tabeli 4.

5.4.3. Decolorisation

Change of leaves' color (decolorisation) shall be an important diagnostic indicator of crown condition and may be assessed as per the classes given in Table 4.

Tabela 4/Table 4.

Klasa / Class	**Dekolorizacija / Decolorisation**	**Procenat iglica / lišća koje je izgubilo boju / Needle /leaf loss %**
0	nema / none	0 – 10%
1	slaba / slight	> 10 – 25%
2	srednja / moderate	> 25 – 60%
3	jaka / severe	> 60%-100
4	suva stabla / dead	- 100

Klase dekolorizacije prema UN/ECE i EU klasifikaciji/ Decolorisation classes according to the UN/ECE and EU classification

5.4.4. Oštećenja

Definicije

Oštećenje se definiše kao mijenjanje ili narušavanje dijela stabla, što može imati nepovoljan uticaj na njegovu sposobnost da vrši svoje funkcije.

Simptom: svako stanje stabla koje proizilazi iz djelovanja štetnog agensa koje ukazuje na njegovu pojavu (npr. defolijacija, dekoloracija, nekroza). *Znak:* dokaz o štetnom faktoru osim onoga na šta stablo ukazuje (npr., tijela koja proizvode gljive, gnijezda gusjenica isl).

5.4.4. Damages

Definitions

Damage shall be defined as changing or alternating a part of tree, which might have unfavorable impact on its ability to perform its functions.

Symptom: any condition of the tree originating from harmful agent activities indicating its appearance(e.g. defoliation, discoloration, necrosis).

Sign: evidence on harmful factor except for what the tree indicates to (e.g. bodies producing fungi, caterpillar nests).

Odumiranje: smrtnost grana koja počinje na krajnjem dijelu grane i nastavlja se na deblu i / ili osnovi žive krošnje.

Sa obzirom da je kategorija oštećenja kombinovana iz procjene defolijacije i dekolorizacije ona se određuje preko kombinovane procjene. Primjer je dat na tabeli ispod.

Dying out: mortality of branches starting at the outmost part of the branch and prolonging to the stem and / or live crown base.

Since the category of damage has been combined from assessment of defoliation and decolorisation, it shall be determined through the combined assessment. Example is given in the Table below.

Tabela 5/ Table 5.

Klasa defolijacija/ Defoliation Class	Klasa promena boje/ Decolorisation Class			
	0	1	2	3
	Rezultirajuća klasa oštećenja/ Resulting class of damage			
0	0	0	1	2
1	0	1	2	2
2	1	2	3	3
3	2	3	3	3

Kombinovana procjena oštećenja/ Combined damage assessment

5.5. Kontrola kvaliteta i osiguranje kvaliteta

Iskustva sa nivoa I i nivoa II su ukazala na značaj obezbjeđivanja adekvatnog kvaliteta. Važne su četiri najznačajnije oblasti da bi posao bio kvalitetno obavljen.

1. odabir terenskih timova,
2. obuka terenskih timova,
3. vjerodostojnost podataka,
4. međunarodna kontrola kvaliteta.

5.5. Quality control and quality assurance

Experiences from levels I and II have pointed out the significance of providing adequate quality. Four most significant areas shall be important in order to have the job done in a qualitative manner.

1. Selection of field teams,
2. Training of field teams,
3. Authenticity of data,
4. International quality control.

6. Praćenje stanja šuma u Crnoj Gori 2010. godine-Nivo I

Shodno obavezama koje proizilaze iz Nacionalne šumarske politike, Nacionalne strategije održivog razvoja kao i preuzetim obavezama iz upitnika EU, Crna Gora je rešenjem Ministra poljoprivrede, šumarstva i vodoprivrede broj 322/10 – 0801 od 30. avgusta 2010. godine obrazovala Koordinacioni tim za praćenje zdravstvenog stanja šuma u Crnoj Gori, čime su pokrenute aktivnosti na realizaciji ove aktivnosti.

Zadatak Koordinacionog tima je da sprovede vjerodostojnost i analizu prikupljenih podataka o zdravstvenom stanju šuma u Crnoj Gori na terenu, za potrebe stalnog monitoringa po ICP metodologiji, kao i izrade završnog izvještaja.
Provjeru podataka na terenu (5-10% uzornih tačaka), Koordinacioni tim je vršio u skladu sa upustvima datim u Priručniku za procjenu zdravstvenog stanja, kao i aneksima tog dokumenta. U slučaju značajnih odstupanja, Koordinacioni tim je dužan da odmah organizuje usklađivanje ili pojašnjenje instrukcija i njihove primjene kako bi se izbjegle sistemske greške. Terenske preglede poređenja podataka, zajedno sa detaljima bilo koje preduzete radnje treba dokumentovati za potrebe potencijalnih međunarodnih evaluacija.
Koordinacioni tim je dužan da organizuje da se podaci o procjeni zdravstvenog stanja u papirnoj i elektronskoj formi (uključujući obavezne i sve izborne parametre) moraju dostaviti odgovornom centru do kraja ove godine.

6. Monitoring forest status in Montenegro in 2010. – Level I

According to the commitments emanating from the National Forest Policy, National Strategy of Sustainable Development and the commitments from the EU Questionaire, by the Decision of the Ministry of Agriculture, Forestry and Water Management number 322/10 – 0801 as of August 30th, Montenegro has established the Coordination team for Monitoring Health Status of Forests in Montenegro, which has initiated activities in implementation of this activity.

Task of the Coordination Team shall be to carry out authenticity and review of data collected about the health status of Montenegrin forests in the field, for the needs of permanent monitoring according to the ICP Methodology, and for preparation of the Final report.
Coordination Team was performing verification of the data in the field (5-10% of sample plots), in accordance with the instructions provided in the Manual for Assessment of Health Status, and with the Annexes of that document. In case of substantial deviations, Coordination Team shall commit to immediately organize harmonization or clarification of both the instructions and their implementation in order to avoid system errors. Field reviews of data comparison, together with details of any actions undertaken, should be documented for the purposes of potential international evaluations.
Coordination team shall commit to organize the data about the assessment of health status must be submitted in either hard copy or electronically (including mandatory and all the optional parametres) to the responsible center by the end of this year.

U sklopu pripremnih aktivnosti, Ministarstvo je angažovalo eksperte sa Šumarskog fakulteta iz Beograda koji su izvršili obuku osoblja Uprave za šume (seminar održan 25. juna 2010. godine).
Obuku za izvještavanja praćenja i procjene zdravstvenog stanja šuma (ICP) obavili su prof. Dr Dragan Karadžić, prof. Dr Ratko Kadović, sa Šumarskog fakulteta – Beograd, Zlatan Radulović i Slobodan Milovanović stručni saradnici Instituta za šumarstvo – Beograd. Predmetna obuka (Slika 12,13) se sastojala u osposobljavanju upošljenih u Upravi za šume na obradi upitnika, vršenju načina postavljanja tačaka, procjene zdravstvenog stanja šuma i sl. Nakon toga organizovana je priprema materijala za rad timova na terenu (izvršeno je prevođenje kompletnog materijala, pripremljene su radne karate, izvršeno je štampanje manuala) i uspostavljena je komunikacija sa Centrom za koordinaciju programa u Hamburgu (http://www.icp-forests.org), kome će se preko ovog Ministarstva ubuduće prosljeđivati izvještaji o zdravstvenom stanju šuma.

Within the framework of preparatory activities, the Ministry engaged experts from the Forestry Faculty in Belgrade who executed the training of Forest Administration staff (Seminar held on June 25th, 2010.).
Training about reporting on monitoring and evaluation of health status of forests (ICP) was provided by prof. Dr Dragan Karadžić, prof. Dr Ratko Kadović, from Forestry Faculty – Belgrade, Zlatan Radulović and Slobodan Milovanović expert associates of Forestry Institute – Belgrade. The respective training (Figure 12,13) consisted of educating employees of the Forest Administration on processing of the questionaire, executing method of placing plots, assessment of health status of forests, etc. After that, they organized preparation of material for field work of the teams (translation of complete material was done, situation maps were prepared, printing of Manual completed) and communication with the Center for Program Coordination in Hamburg (http://www.icp-forests.org) had been established, where the Reports on Health Status of Forests shall in future be forwarded to, through our Ministry.

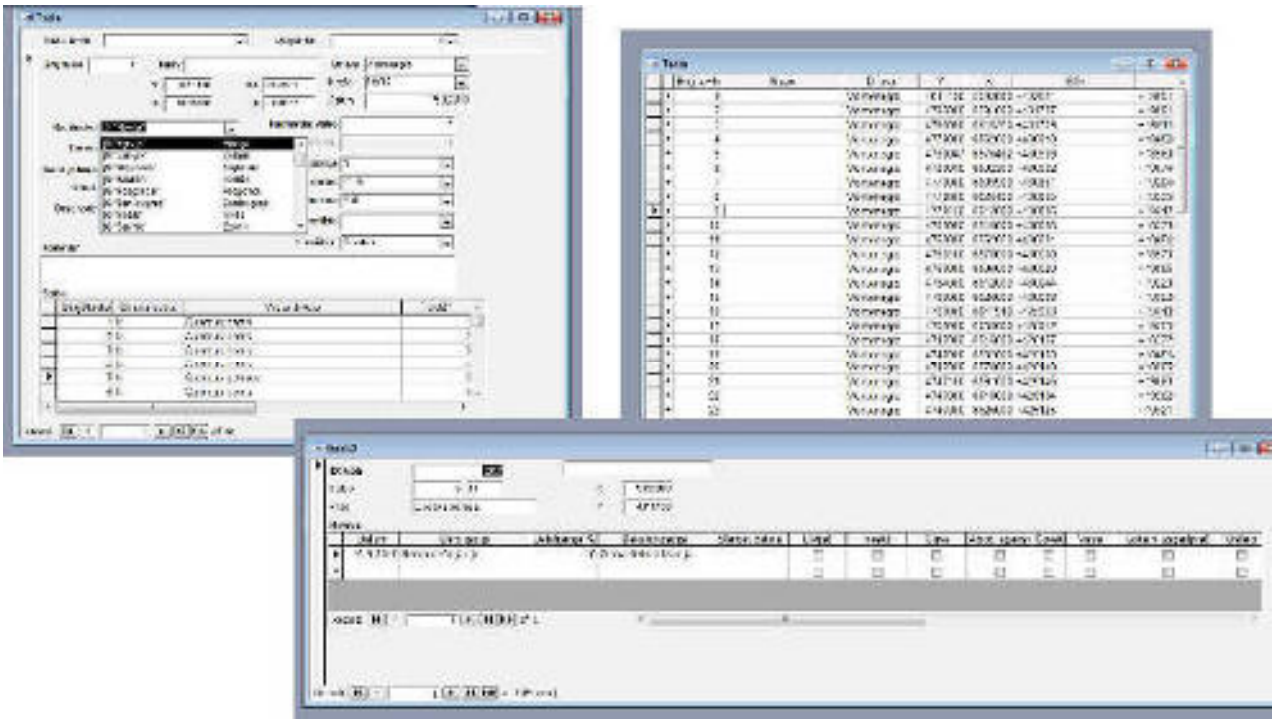
Slika 12/Figure 12.

Slika 13/Figure 13.

Sa strane Uprave za šume obrazovano je pet radnih timova koje su sačinjavali iskusni šumarski stručnjaci. Procjene stanja su izvršene na svih 49 definisanih tačaka.
Po završenim terenskim aktivnostima pristupljeno je izradi odgovarajućeg softvera, unosu i obradi podataka (slika 14).

Five working teams was established by Forest Administration, consisting of experienced forestry experts. Status assessments have been executed in all 49 defined plots. After completion of field activities they have acceded to development of appropriate software, entry and processing of data (Figure 14).

Slika 14/Figure 14.



Kordinacioni tim izvršio je sumiranje, obradu i dostavljenje podataka Centru za koordinaciju programa u Hamburgu (Anex 2) i pristupilo se izradi ovog izvještaja.

Coordination team finalized summarizing , processing and submiting data to the Center for Program Coordination in Hamburg (Annex 2) and then it came to preparation of this report.

6.1. Lokacija Bioindikacijskih tačaka u Crnoj Gori – Nivo I

U Crnoj gori je postavljeno 49 bioindikacijskih tačaka. Pojedine tačke su u pravilnoj mreži „pale“ na gradske površine, vodene površine ili goleti, te su shodno preporukama iz priručnika izmještene (npr. ukoliko se u blizini tjemena mreže nalazila površina koja ispunjava uslove propisane metodologijom). U slučaju da nije postajala takva mogućnost površine su isključene do momenta promjene stanja pokrivača na toj površini. Tačke koje su recimo „pale“ na površinu gde je trajno onemogućen rast i razvoj šumskog drveća su isključene iz monitoringa (npr. bioindikacijska tačka koja je pala na Skadarsko jezero ili u Jadransko more).

U budućnosti će se takođe vršiti provjera i analiza preko satelitskih i ortofoto snimaka kao i fizičkim obilaskom na terenu u cilju da se pojedine površine koje trenutno nemaju šumski prekrivač u slučaju da budu pošumljene prirodnim ili vještačkim putem, dodatno uključe u istraživanje prema postojećoj metodologiji.

Sve površine su obilježene na terenu metalnom šipkom jarke boje u sredini primjerne površine, izabrana su i obilježena stabla koja su predmet posmatranja (ukupno 24) na svakoj posmatranoj BIT. Lokacija je snimljena kartografski i pomoću GPS opreme.

Sva izabrana stabla po predviđenoj proceduri obojena su i numerisana trajnim oznakama da bi bila lakše uočljiva prilikom narednih procjena koje se obavljaju svake godine.

6.1. Location of bio indication plots in Montenegro– Nivo I

49 bio indication plots have been placed in Montenegro. Some plots have, within the regular grid „fallen“ on town areas, water areas or barren areas, and according to the recommendations from the Manual have been relocated (e.g. if close to the grid vertex there had been an area meeting the requirements set by the methodology). In case that such a possibility did not exist, areas were excluded up to the moment of changing the cover status in the same area. Plots which, for example „fallen“ on area where growth and development of forest trees have been permanently disabled were excluded from monitoring (e.g. bio indication plot that fell in the Skadar Lake or in the Adriatic Sea).

In future, verification and reviewing shall also be done via satellite and orthophoto images as well as through physical round trip to the terrain, aiming at additionally including certain areas currently without forest cover, in case they are afforested naturally or artificialy, in this research according to the current methodology.

In the field, all areas shall be marked by metal stake of bright color placed in the middle of sample plot, trees that shall be subject of observation have been selected and marked (total of 24) at each observed bio indication plot. The site has been recorded cartographically and by GPS equipment. All of the selected trees have , as per the anticipated procedure, been painted and numbered by permanent marks in order to be easily visibly at future assessments that are going to be held each year.

Slika 15/Figure 15.

Crna Gora je za potrebe daljeg izvještavanja dobila poseban identifikacioni kod (broj 80) u cilju raspoznavanja i kodnog sistema radi dostavljanja podataka kordinacionom centru u Hamburgu.
Na tabeli 6 prikazan je raspored tačaka po opštinama dok je na slici 16. prikazan grafički raspored tačaka BIT za 2010 godinu u Crnoj Gori.
Podaci o pojedinačnim tačkama date su grafičkim prikazom (Anex 1) i tabelarno (Anex 2).

For purposes of further reporting Montenegro was assigned a special identification code (number 80) aiming at recognizing and having the code system of submitting data to the Coordination Center in Hamburg.
Table 6 presents the distribution of plots throughout muunicipalities, while Figure 16. gives the graphic disposition of bio indication plots for 2010 in Montenegro.
Data about individual plots shall be given in graphic overview (Annex 1) and in the Table (Annex 2).

Tabela 6. Broj tačaka po opštinama/ Table 6. Number of plots per municipalities

Redni broj.	Naziv opstine	Broj tačaka koje se pale na teritoriju opštine
1.	Andrijevica	1
2.	Bar	1
3.	Berane	3
4.	Bijelo Polje	4
5.	Budva	1
6.	Cetinje	2
7.	Danilovgrad	1
8.	Herceg Novi	1
9.	Kolašin	4
10.	Kotor	2
11.	Mojkovac	2
12.	Nikšić	9
13.	Plav	1
14.	Pluzine	2
15.	Pljevlja	4
16.	Podgorica	4
17.	Rožaje	2
18.	Savnik	2
19.	Tivat	1
20.	Ulcinj	1
21.	Žabljak	1
Ukupno	21	49

Slika 16. BIT u Crnoj Gori – prostorni raspored / Figure 16. Bio indication plots in Montenegro –spatial distribution

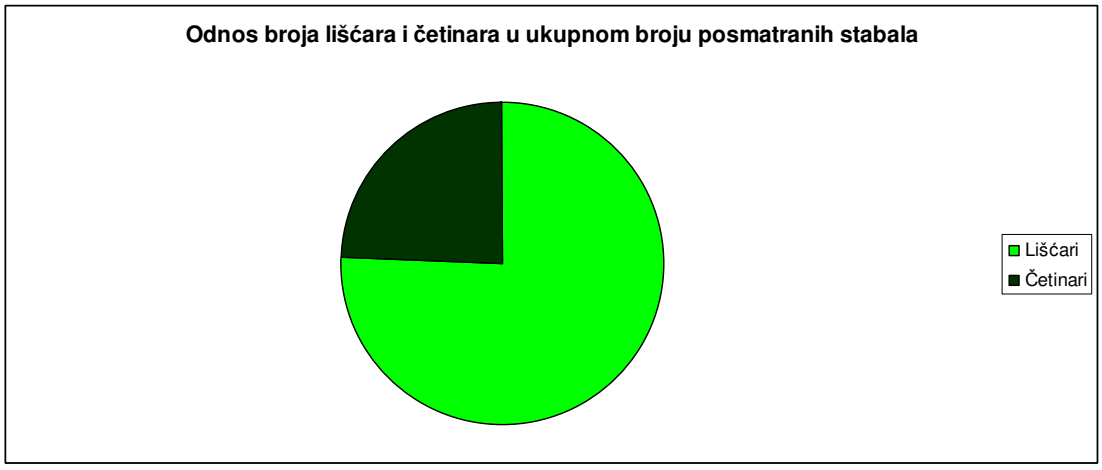
6.2. Zastupljenost vrsta drveća na bioindikacijskim tačkama

U toku 2010 godine izvršeno je posmatranje na 49 BIT i ovo posmatranje je obuhvatilo ukupno 1176 stabala. Od ukupnog broja od 1176 posmatranih stabala, lišćari čine 75, 51% ili 888 stabala dok su ostalih 24,49 % ili 288 stabala četinari (grafikon 1).

6.2. Presence of tree species in bio indication plots

During the 2010 observations were carried out on 49 bio indication plots and they included the total of 1176 trees. Out of total number of 1176 observed trees, broadleaves made 75, 51% or 888 trees, while remaining 24,49 % or 288 trees were conifers (graph 1).

Grafikon 1/ Graph 1.



Odnos lišćara i četinara u ukupnom broju posmatranih stabala/ Ratio of broadleaves and conifers in total number of observed trees

Apsolutni i relativni broj stabala prikazan je u tabeli 7 i na grafikonu 2, u odnosu na ukupan broj stabala, dok su u tabelama 8 i 9 i pratećim grafikonima 3 i 4 prikazane vrijednosti broja vrsta u odnosu na pripadnost listopadnim ili četinarskim vrstama drveća.

Od analiziranih vrsta, najzastupljenija je bukva sa 299 stabala, ili 25,42% od ukupnog broja, zatim slijede hrast cer 108 stabala ili 9,18 % a potom smrča koja je na trećem mjestu po brojnosti obuhvaćenih stabala (posle bukve i cera) sa 102 stabla ili 8,67 %. Jela sa 100 stabala je obuhvatila 8,50% analiziranih stabala, crni jasen 97 stabala ili 8,25% obični grab sa 84 stabla ili

Absolute and relative number of trees is presented in table 7 and in graph 2, in relation to the total number of trees, while tables 8 and 9 and supporting graphs 3 and 4 present the values of number of species in relation to the affiliation to broadleave or coniferous tree species.

Out of the reviewed species, the most present was beech with 299 trees, or 25,42% of total number, then bitter oak with 108 trees or 9,18 % , and then spruce which was on the third place according to the number of trees included(after beech and bitter oak) with 102 trees or 8,67 %. Fir with its 100 trees covered 8,50% of

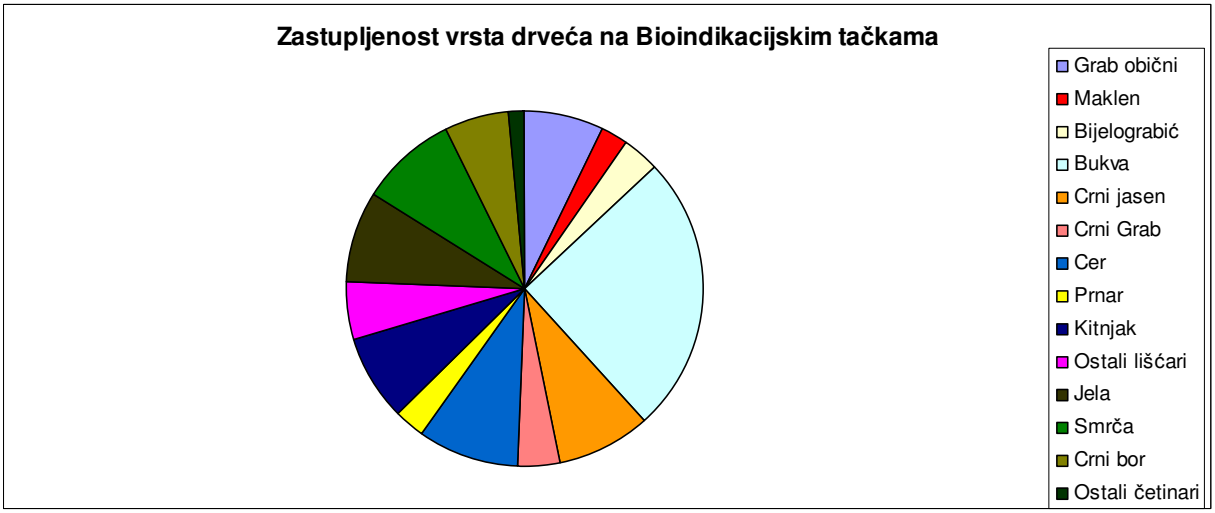
7,14% i crni bor sa 70 stabala ili 5,96% dok ostale vrste imaju mali udio.

reviewed trees, black ash with 97 trees or 8,25% , hornbeam with 84 trees or 7,14% and black pine with 70 trees or 5,96% , while other species had a minor share.

Tabela 7. zastupljenost vrsta drveća na BIT/ Table 7. Presence of tree species in bio indication plots

	Lišćari										Četinari			
	Grab obični	Maklen	Bijelo grabić	Bukva	Crni jasen	Crni Grab	Cer	Prnar	kitnjak	Ostali lišćari	Jela	smrča	Crni bor	Ostali četinari
Broj stabala	84	30	38	299	97	46	108	32	93	61	100	102	70	16
% od ukupnog broja stabala	7,14	2,55	3,24	25,42	8,25	3,91	9,18	2,72	7,91	5,19	8,50	8,67	5,96	1,36
Sum	888 stabala / 75,51%										288stabala / 24,49%			
	1176 stabala / 100%													

Grafikon 2. zastupljenost vrsta drveća na BIT/ Graph 2. Presence of tree species on bio indication plots



Posmatrajući odvojeno lišćare primjećuje se da udio bukve čini trećinu ukupnog broja lišćara 33,67%, dok hrastovi (cer, kitnjak i prnar čine 26,23 %,) odnosno više od četvrtine ukupnog broja lišćara, crni jasen je sa udjelom 10,92% i obični grab sa 9,46% dok ostale vrste lišćara imaju mali udio.

Observing broadleaves separately, it can be noticed that beech share makes one third of total number of broadleaves 33,67%, while oaks (bitter oak, sessile flowered oak and kermes oak make 26,23 %,) , that is, more than the fourth of total number of broadleaves, black ash has a share of 10,92% and common hornbeam with 9,46% , while other broadleaved species have minor shares.

Tabela 8. Zastupljenost lišćarskih vrsta drveća/ Table 8. Presence of broadleaved tree species

	Lišćari									
	Grab obični	Maklen	Bijelog rabić	Bukva	Crni jasen	Crni Grab	Cer	Prnar	Kitnjak	Ostali lišćari
Broj stabala	84	30	38	299	97	46	108	32	93	61
% lišćara	9,46	3,39	4,28	33,67	10,92	5,18	12,16	3,60	10,47	6,87
Sum	888 stabala / 100,00 %									

Grafikon 3. Zastupljenost lišćarskih vrsta drveća/ Graph 3. Presence of broadleaved tree species

Posmatrajući odvojeno četinare primetno je da je na bioindikacijskim tačkama bio približan udio jele i smrče sa (jela 34,72 % i smrča sa 35,42%). Ove dvije vrste čine ukupno više od 70% četinara koje se srijeću na BIT. Pored jele i smrče značajno je i učešće crnog bora od 24,30% dok je učešće ostalih četinara 5,56%.

After observing conifers separately it was noticeable that in bio indication plots there had been the approximate share of fir and spruce (fir 34,72 % and spruce with 35,42%).
These two species in total make more than 70% of conifers found at bio indication plots. Besides fir and spruce, there had been a significant share of black pine with 24,30% , while the share of other conifers had been 5,56%.

Tabela 9. Zastupljenost četinarskih vrsta drveća/ Table 9. Presence of coniferous tree species

	Četinari			
	Jela	Smrča	Crni bor	Ostali četinari
Broj stabala	100	102	70	16
% četinara	34,72	35,42	24,30	5,56
Sum	288stabala / 100,00 %			

Grafikon 4. Zastupljenost četinarskih vrsta drveća/ Graph 4. Presence of coniferous tree species

6.3. Nadmorska visina i ekpozicija Bioindikacijskih tačaka

Nadmorske visine na kojima se javljaju BIT, u pogledu vertikalne rasprostranjenosti zahvataju veoma širok opsjeg, od najniže kote na BIT br. 42 na poluostrvu Luštica kod Tivta gde je visina svega nekoliko metara m.n.v pa sve do najviše kote na BIT br. 34 kod sela Kaludre u opštini Berane gde je izmjereno 1716 m.n.v.

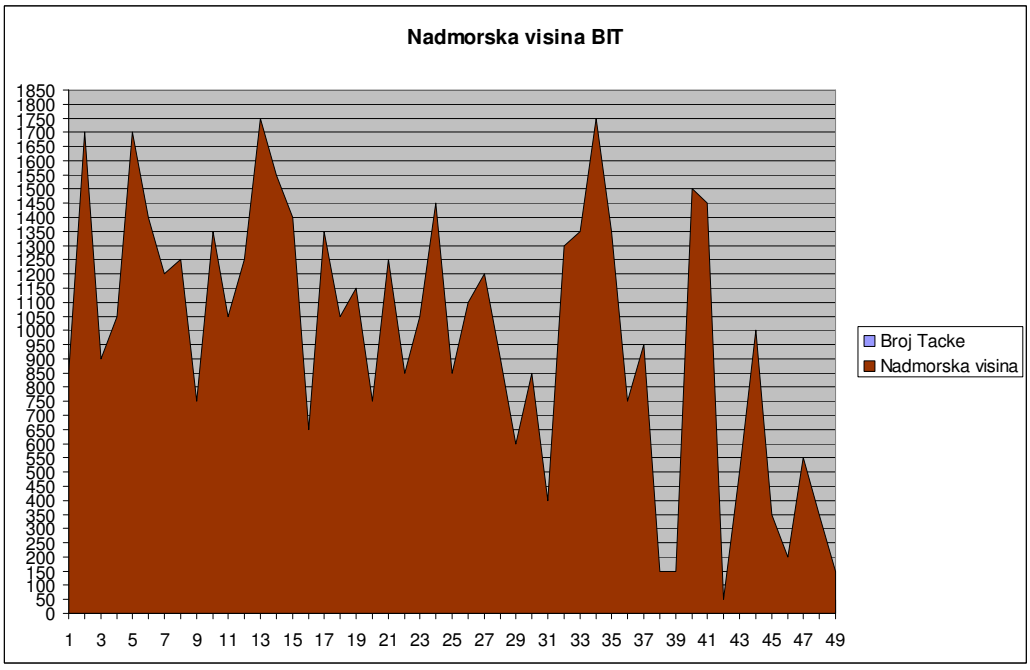
Najveći broj bioindikacijskih tačaka se nalazi na visini od 1201 do 1400 m.n.v. (10 tačaka), dok se veliki broj tačaka (po 8) nalazi i na visinama od 801-1000 m.n.v. i od 1001 do 1200 m.n.v., tako da u visinskoj rasprostranjenosti od 801 do 1400 m.n.v imamo 26 tačaka. Najmanje je bioindikacijskih tačaka rasprostranjeno u pojasu od 201 – 400 m.n.v. (3 tačke) i od 401 do 600 m.n.v. (3 tačke). Grafički raspored tačaka prikazan je na grafikonu 5

6.3. Altitude and exposition of Bioindication plots

Altitudes in which bio indication plots appear, with regard to their vertical distribution, cover a very wide range, from the lowest level in bio indication plot number 42 in peninsula Luštica, close to Tivat, where the altitude is only several meters and up to the highest level of bio indication plot number 34 in village Kaludra, Berane municipality, where 1716 meters of altitude was measured.

The largest number of bio indication plots is situated at heights from 1201 to 1400 meters of altitude (10 plots), while a large number of plots (of 8) is situated at heights from 801-1000 meters of altitude and from 1001 to 1200 meters of altitude, so that within the heights distribution from 801 to 1400 meters of altitude we have 26 plots. The smallest number of bio indication plots is distributed within the range from 201 – 400 meters of altitude (3 plots) and from 401 to 600 meters of altitude (3 plots). Graphic distribution of plots is presented in Graph 5.

Grafikon 5. / Graph 5.



Nadmorska visina Bioindikacijskih tačaka u Crnoj Gori/ Altitude of bio indication plots in Montenegro

BIT u Crnoj Gori javljale su se najčešće na jugistočnoj ekspoziciji - 9 tačaka, na severozapadnoj ekspoziciji nalazilo se 8 tačaka, dok je po 7 tačaka bilo na sjevernoj i sjevernoistočnoj. Po 5 tačaka palo je na zapad i jug, 4 su bile na ravnom terenu i 1 na istoku (grafikon 6).

Bio indication plots in Montenegro have most frequently been seen in south- eastern exposition - 9 plots, in north western exposition there has been 8 plots, while northern and northeastern expositions have had 7 plots each. West and south have 5 plots each, 4 have been in the flat terrain and 1 in the east (graph 6).

Grafikon 6. Rasprostranjenost bioindikaciskih tačaka po ekspozicijama/
Graph 6. Distribution of bio indication plots per expositions

6.4. Zastupljenost vode

Raspoloživost dostupne vode za najznačajnije vrste određuje se procjenom i sadrži sledeće 3 kategorije:

1: Nedovoljno
2: Dovoljno
3: Prekomjerno

6.4. Presence of water

Availability of accessible water for most significant species shall be defined by assessment and shall contain the following 3 categories:

1: insufficient
2: sufficient
3: excess

Posmatranjem Bioindikacijskih tačaka u Crnoj Gori primijećeno je da na 23 površine zastupljenost vode nedovoljna, dakle na 46,94 % posmatranih površina, dok je na 26 površina ili 53,06 % zastupljenost vode dovoljna. Prekomjerna zastupljenost vode nije evidentirana ni na jednoj analiziranoj površini. Nedovoljna zastupljenost vode je evidentirana na tačkama koje se raspoređene na južnoj polovini države (južnije od Nikšića, Cetinja i Podgorice i u primorju), gde je karakteristična pojava krečnjačkih masa kao i uticaj mediteranske klime. Tačke koje su „pale“ u sjevernom regionu države, i pod uticajem su kontinentalne klime, karakterišu se dovoljnom zastupljenošću vode (slika 17).

After observing the bio indication plots in Montenegro it was observed that presence of water in 23 areas was insufficient, hence, in 46,94 % of observed areas, while presence of water in 26 areas or 53,06 % was sufficient. Excess presence of water was not recorded in any of the reviewed areas.

Insufficient presence of water was recorded in plots distributed in southern part of the state (southern from Nikšić, Cetinje and Podgorica and in the coast), where we had the characteristic phenomena of limestone masses as well as the Mediterranean climate impact. Plots that „fell“ within the northern state region and are under the continental climate impact, are characterized by sufficient presence of water. (Figure 17).

Slika 17/Figure 17.

Karta dostupnosti vode Na BIT u Crnoj Gori/ Map of water accessibility in bio indication plots in Montenegro

6.5. Starost dominantnog sprata

U zavisnosti od starosti šumskog drveća različit je intenzitet njegovih fizioloških funkcija koji rezultiraju boljom odbrambenom mogućnošću na uticaj stresora i pojavu zagađenja kao i uticaja drugih biotičkih i abiotičkih agenasa. Srednja starost dominantnog sprata definisana je kroz 7 klasa.

6.5. Age of the dominant storey

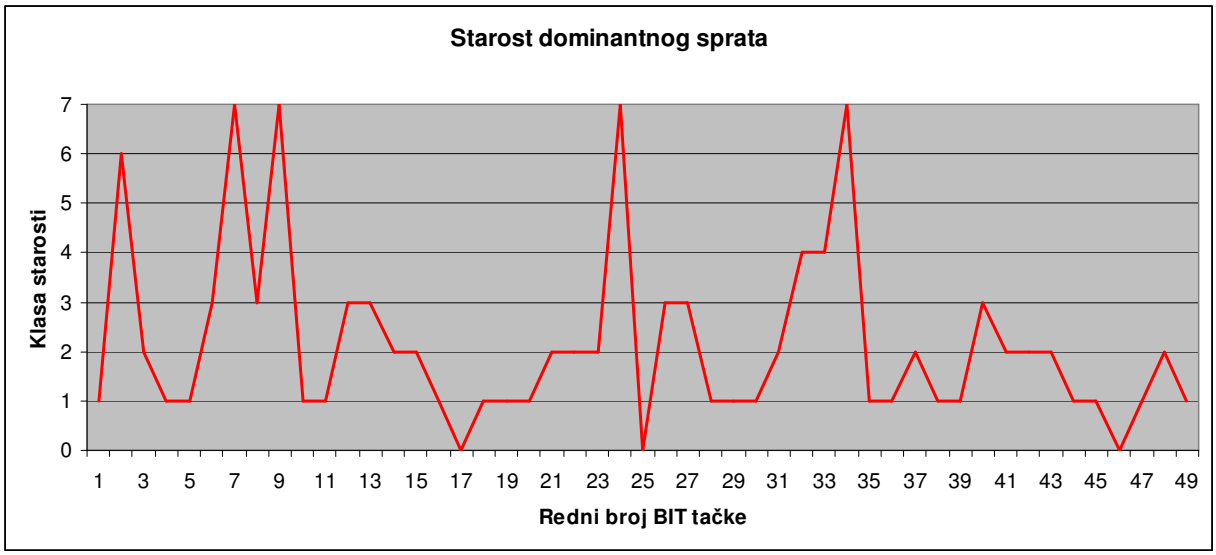
Subject to the age of forest trees we have the different intensity of their physiological functions resulting in better defence capabilities against stress and pollution, and other biotic and abiotic agents. Average age of dominant storey is defined through 7 classes.

Tabela 10 / Table 10.

Starost dominantnog sprata/ Age of dominant storey	
0	≤ 20
1	21— 40
2	41— 60
3	61— 80
4	81—100
5	101—120
6	> 120
7	raznodobna /unevenaged

Raspored klasa starosti u odnosu na bioindikacijske tačke prikazan je grafički./
Distribution of age classes in relation to bio indication plots is presented by graphs.

Grafikon 7/Graph 7.



Posmatranjem je utvrđeno da je na 20 posmatranih površina učešće starosti stabala dominantnog sprata drveća od 21 do 40 godina (u klasi 1). U klasi 2 starosti dominantnog sprata od 41 –60 godina nalazi se 12 primjernih površina. Starosna klasa 3 od 61-80 godina javila se na 7 posmatranih BIT. Raznodobne sastojine primjećene su u 4 slučaja. Mlade sastojine do 20 godina starosti dominantnog sprata zabeležene su na 3 tačke. Na dva klastera Starost gornjeg sprata je bila između 81-100 godina dok je jedna površina zabeležena kao površina prašumskog tipa gde je starost dominantnog sprata procenjena na više od 120 godina.

It was identified after the observation that on 20 of observed areas age share of the trees of dominant storey was from 21 to 40 years (in class 1). In class 2 where age of the dominant layer was from 41 –60 years there are 12 sample plots. Age class 3, from 61-80 years appeared in 7 observed bio indication plots. Unevenaged stands were noticed in 4 cases. Young stands of up to 20 years old of dominant storey were recorded in 3 plots. In two clusters, age of the upper storey was between 81-100 years, while one area was recorded as area of virgin forest type, where dominant storey age was assessed at more than 120 years .

6.6. Plodonošenje drveća posmatranog na BIT u 2010 godini

Definicija

Definiše kao procjena plodonošenja u krošnji. Samo plodovi proizvedeni u godini ocjene se uzimaju u obzir.

Podaci o plodonošenju su korisni zbog njegovog uticaja na karbon ekonomiju stabla iz razloga što plodonošenje preusmjerava energiju biljke iz drugih djelova stabla. Može na taj način uticati i na buduću strukturu grana drveta. Ovaj parametar pogotovu kod bukve može obezbijediti veoma vrijednu informaciju.

Metode

Prilikom posmatranja vrše se dvije ocjene: ocjena dijela krošnje i cijele krošnje. Bodovanje je sledeće:

6.6. Fructification of trees observed in bio indication plot in 2010

Definition

It shall be defined as assessment of fructification in the crown. Only fruit produced in the assessment year shall be taken into account.

Fructification data shall be useful because of their impact on carbon economy of tree because fructification shall redirect the plant energy from other parts of the stem. Thus, it also may impact the future structure of tree branches.
This parameter may provide a very valuable information, especially at beech.

Methods

Two evaluations shall be done at observation: evaluation of a part of the crown and entire crown. Scoring shall be as follows:

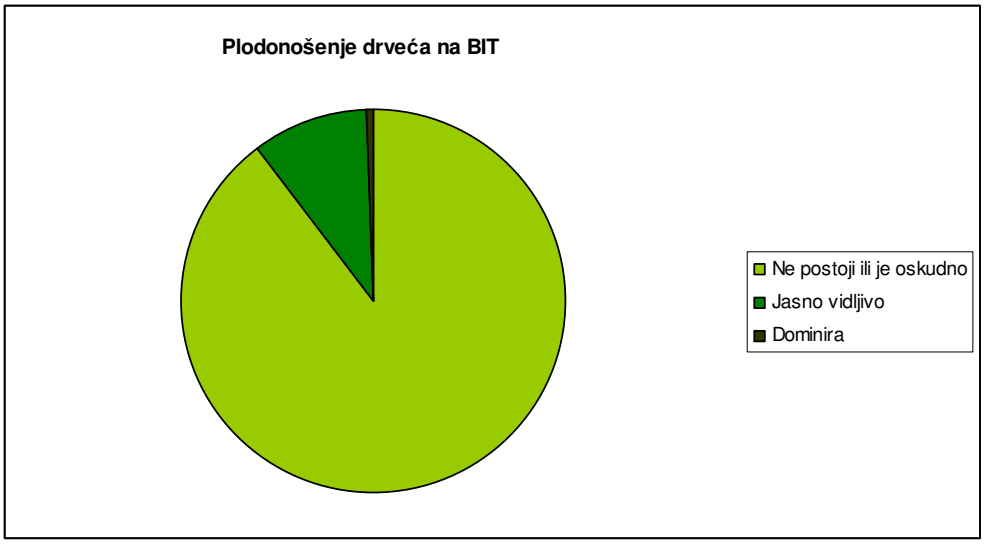
- *Ne postoji ili je oskudna.* Plodovi nijesu zapaženi tokom površnog ispitivanja.
- *Često.* Plodonošenje je jasno vidljivo.
- *Obimno.* Plodonošenje dominira u pojavi stabla.

- *does not exist or is very poor.* Fruit have not been spotted during the superficial examination.
- Frequent. Fructification is clearly notable.
- *Abundant* : Fructification dominating in stem appearance.

Prilikom posmatranja tokom 2010 godine na najvećem broju stabala (1056) plodonošenje nije postojalo ili je bilo oskudno, jasno vidljivo plodonošenje javilo se na 112 stabala dok je na 8 stabala bilo veoma obimno. Grafički prikaz dat je na slici ispod.

During the observation in 2010 fructification did not exist in the largest number of trees (1056) or was very poor, clearly visible fructification appeared in 112 trees, while in 8 trees it was very abundant. Graphic overview is given in the figure below.

Grafikon 9/Graph 9.



Plodonošenje drveća na BIT za 2010 godinu u Crnoj Gori/ Fructification of trees in bio indication plots for 2010 in Montenegro

7. Defolijacija dekolorizacija i oštećenja kruna drveća u 2010. godini

7.1. Defolijacija -2010 godina

Definicija

Defolijacija se definiše kao gubitak iglica / lišća u krošnji koja se može ocjenjivati u odnosu na referentno stablo. Vrši se ocjena defolijacije bez obzira na uzrok gubitka lišća (odnosno, na primjer, obuhvata oštećenja koja izazivaju insekti). Defolijacija može obuhvatiti tanke krošnje nastale zbog nedostatka lišća, imajući u vidu da je možda nemoguće odvojiti ovo od istinske defolijacije.
Ovo je jedna od standardnih ocjena koje se vrše na nivou I. Postoje značajni problemi kod njene definicije, kao što je da kompletna harmonizacija njene definicije i metode ocjene u različitim državama je nemoguća.

Metode

Defolijacija se ocjenjuje u 5% koraka. Ove klase su 0.5 (>0-5%), 10 (>5-10%), itd. Stablo sa defolijacijom između >95% i 100%, koje je i dalje živo, se unosi kao 99. Ukupan broj bodova od 100 je rezervisan za mrtva stabla (Regulativa EK). Stabla treba uključiti u ovih 5% klasa, a ne u grupe.
Na grafikonu 10. je prikazano učeće broja stabala obuhvaćenih određenom klasom defolijacije.

7. Defoliation, decolorization and damages of tree crowns in 2010.

7.1. Defoliation -2010

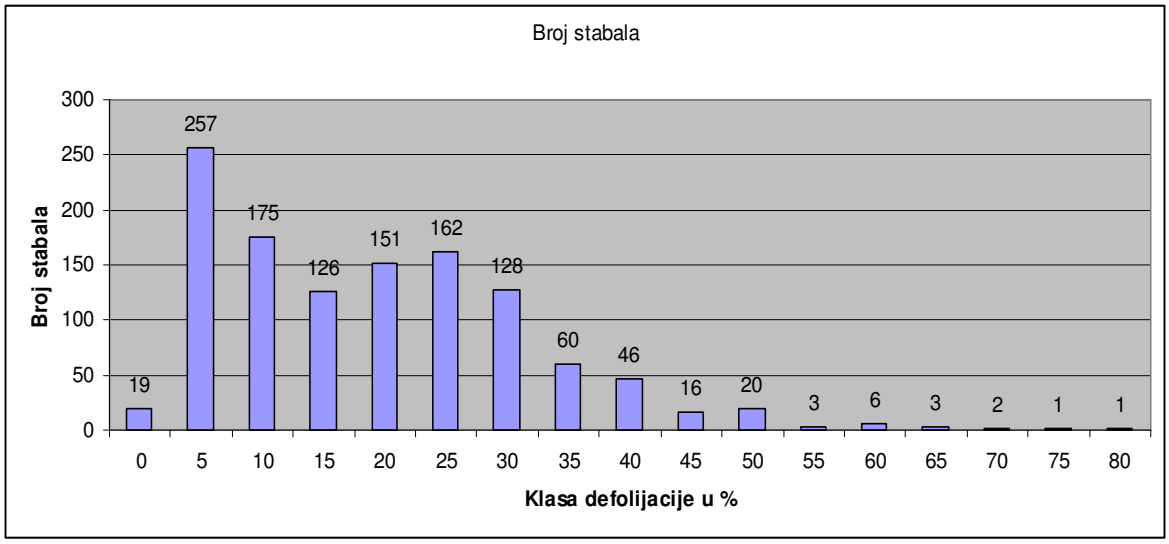
Definition

Defoliation shall be defined as loss of needles / leaves in the crown, which can be evaluated compared to the reference tree. Evaluation of defoliation shall be done regardless to the cause of loosing leaves (that is, for example, it shall include the damages caused by insects). Defoliation may include the thin crowns incurred because of the lack of leaves, having in mind it would perhaps be impossible to separate it from the actual defoliation.
This is one of the standard evaluations done in level I. There are significant problems in defining it, such as that complete harmonization of its definition and evaluation method in different countries is impossible.

Methods

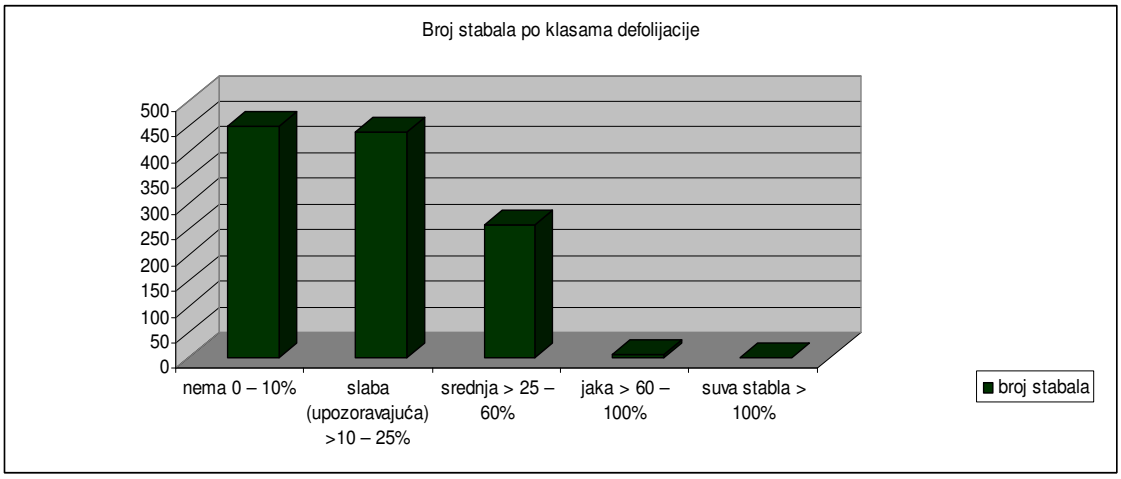
Defoliation shall be evaluated in 5 steps. These classes are 0.5 (>0-5%), 10 (>5-10%), etc. Tree having defoliation between >95% and 100%, still alive, shall be entered as 99. Total number of 100 scores shall be reserved for dead trees (EC regulation). The trees should be included in these 5% of classes, and not in groups.
The graph 10 provides the share of number of trees included in certain class of defoliation.

Grafikon 10 / Graph 10.



Učešće broja stabala bez obzira na vrstu drveća po procentnoj skali defolijacije/ Share of the number of trees regardless to tree species, as per the percentage defoliation scale

Grafikon 11/Graph 11.



Ukupno učešće svih vrsta u odnosu na broj stabala po klasama defolijacije / Total share of all the species compared to the number of trees as per the defoliation classes

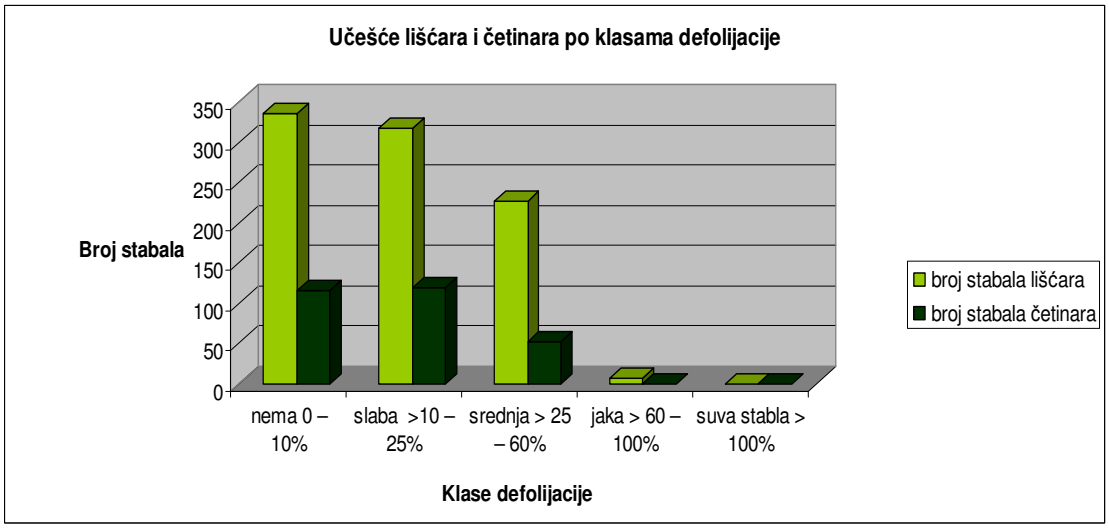
Sa grafikona br.11 se vidi da je najveći broj stabala obuhvaćenih posmatranjima (451) ili 38,35 % bez defolijacije (do 10 % defolijacije) ili sa slabom (439) što čini 37,33% (u klasi od 10 do 25 % defolijacije) dok je veoma mali broj stabala u klasi iznad 60%. sa vidljivim gubitkom lišća/četina tj. sa jakom defolijacijom.

From graph no.11 it can be seen that the largest number of trees included in observations (451) or 38,35 % is without defoliation (up to 10 % of defoliation) or with weak defoliation (439) which makes 37,33% (in class from 10 to 25 % of defoliation) while a small number of trees in class above 60%. Is with noticeable loss of leaves/needles, that is, with strong defoliation.

Ukupno učešće lišćara i četinara sa odnosom broja stabala lišćara u odnosu na četinare po klasama defolijacije prikazano je na grafikonu 12.

Total share of broadleaves and conifers with ratios between the number of broadleave trees compared to the conifers, per defoliation classes, has been presented in Graph 12.

Grafikon 12/Graph 12.



Učešće lišćarskih i četinarskih vrsta u odnosu na broj stabala po klasama defolijacije / Share of broadleave and coniferous species compared to the number of trees per defoliation classes.

Sa grafikona se može primjetiti da je i u slučaju lišćara i u slučaju četinara primjetan sličan trend rasporeda broja stabala po klasama defolijacije samo sa različitim apsolutnim brojem stabala i jasno se primećuje da je najveći broj stabala bez defolijacije ili sa slabom (čine 75,68% od ukupnog broja posmatranih stabala), dok je veoma malo stabala (0,59% sa jakom defolijacijom.

It can be seen from the Graph that in case of both the broadleaves and conifers we have a noticeably similar trend in distribution of number of trees per defoliation classes , only with different absolute number of trees and it can be clearly noticed that the largest number of trees is without defoliation or with a weak one (they make 75,68% of total number of observed treesa), while there are a few trees (0,59% with strong defoliation).

7.1.1 Defolijacija – Lišćari

Struktura defolijacije kod lišćara prikazana je po najvažnijim vrstama tabelarno i grafički preko broja stabala i procenta defolijacije:

7.1.1 Defoliation – Broadleaves

Structure of defoliation at broadleaves is presented as per the most important species, in tables and graphs, through number of trees and percentage of defoliation.:

Tabela 11/table 11.

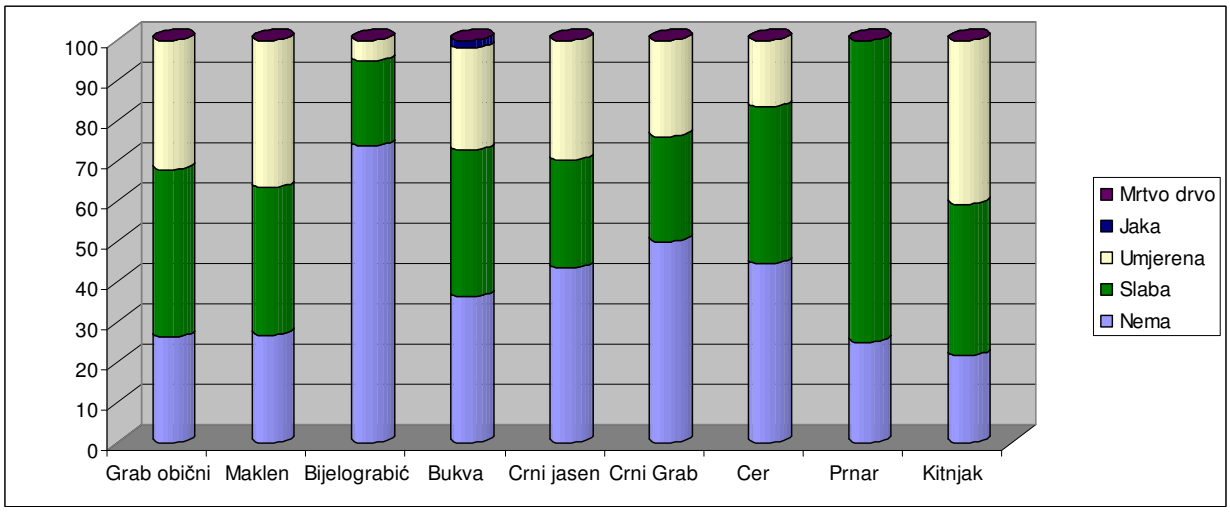
Defolijacija		Lišćari								
		Grab obični	Maklen	Bjelograbić	Bukva	Crni jasen	Crni Grab	Cer	Prnar	Kitnjak
Nema0-10%	Br.stabala	22	8	28	108	42	23	48	8	20
	%	26,19	26,66	73,69	36,12	43,30	50,00	44,44	25,00	21,50
Slaba >10-25%	Br.stabala	35	11	8	109	26	12	42	24	35
	%	41,67	36,67	21,05	36,45	26,80	26,08	38,89	75,00	37,63
Umjerena >25-60%	Br.stabala	27	11	2	76	29	11	18	-	38
	%	32,14	36,67	5,26	25,42	29,90	23,92	16,67	0.00	40,87
Jaka >60 - <100%	Br.stabala	-	-	-	6	-	-	-	-	-
	%	0,00	0,00	0,00	2,01	0,00	0,00	0,00	0,00	0,00
Mrtvo drvo 100%	Br.stabala	-	-	-	-	-	-	-	-	-
	%	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Ukupno	Br.stabala	84	30	38	299	97	46	108	32	93
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Defolijacija lišćarskih vrsta u 2010 godini/ Defoliation of broadleave species in 2010

Procentualno je kod lišćara izražena otpornost prema štetnim uticajima i kao najotpornija vrsta pokazao se bjelograbić sa 73,69 % stabala bez ikakve defolijacije, pa crni grab sa 50,00% ili polovinom posmatranih stabala. Veoma zadovoljavajuće stanje primećeno je u slučaju cera 44,44%, crnog jasena 43,30 % i bukve 36,12%

At broadleaves, the resistance to harmful impacts is prominent when given in percentage, and the most resistant species had been oriental hornbeam with 73,69 % of trees without any defoliation, then hop hornbeam with 50,00%, or half of the observed trees. Very satisfactory status has been observed in case of bitter oak 44,44%, black ash 43,30 % and beech 36,12% .

Grafikon 13 / Graph 13.



Grafički prikaz stepena defolijacije lišćara u 2010 godini/ Graphic overview of broadleaves defoliation level in 2010

Kao najugroženija vrsta javlja se hrast kitnjak gde je pojava da nema defolijacije zabeležena tek na svakom 5 stablu (21,50%) i hrast prnar sa 25,00 % gde je svako 4 stablo bez defolijacije. Generalno gledajući vrste roda Quercus (hrastovi) su se pokazale kao najugroženije izuzev cera koji pokazuje zadovoljavajuću otpornost.

Sessile flowered oak appears as one of the most endangered species, where phenomena to be without defoliation has been recorded only at each 5th tree (21,50%) and kermes oak with 25,00 % where each fourth tree is without defoliation. Generally observed, species of genus Quercus (oaks) have appeared as the most endangered ones, except for bitter oak which has shown satisfactory resistance.

7.1.2. Defolijacija – Četinari

Struktura defolijacije kod četinara prikazana je po najvažnijim vrstama tabelarno i grafički preko broja stabala i procenta defolijacije:

7.1.2. Defoliation – Conifers

Defoliation structure at conifers is presented according to the most important species, in tables and graphs through the number of trees and defoliation percentage:

Tabela 12 / Table 12.

Defolijacija		Četinari		
		Jela	Smrča	Crni bor
Nema	Br.stabala	33	42	33
0-10%	%	33,00	41,17	47,15
Slaba	Br.stabala	46	45	24
>10-25%	%	46,00	44,12	34,28
Umjerena	Br.stabala	21	15	13
>25-60%	%	21,00	14,71	18,57
Jaka	Br.stabala	-	-	-
>60 - <100%	%	0,00	0,00	0,00
Mrtvo drvo	Br.stabala	-	-	-
100%	%	0,00	0,00	0,00
Ukupno	Br.stabala	100	102	70
	%	100%	100%	100%

Defolijacija četinarskih vrsta u 2010 godini / Defoliation of coniferous species in 2010.

Procentualno je kod četinara izražena otpornost prema štetnim uticajima i kao najotpornija vrsta pokazao se crni bor sa 47,15 % stabala bez znakova defolijacije. Veoma zadovoljavajuće stanje primijećeno je kod smrče 41,17 %.

Kao najugroženija vrsta javlja se jela gdje je bez znakova defolijacije konstatovano svako 3 stablo 33,00 %. Slabija otpornost jele nije lokalna pojava i javlja kao ugrožena vrsta na pojavu defolijacije širom Evrope.

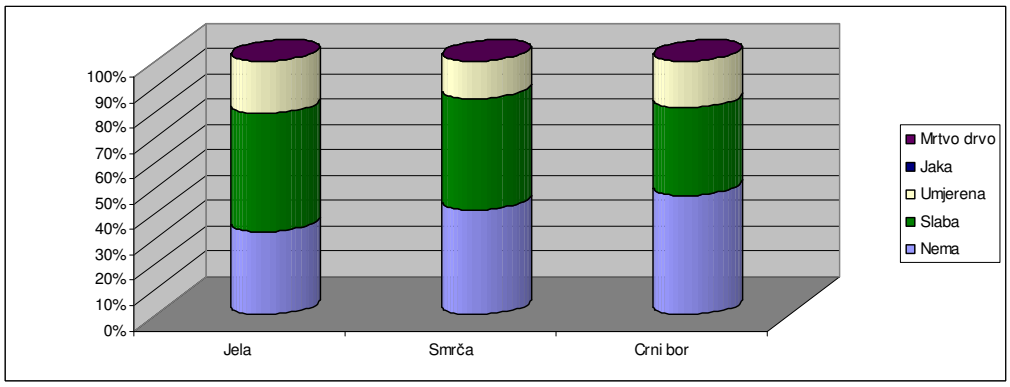
Resistance of conifers to harmful impacts has been stated in percentage rates, and the black pine has appeared as the most resistant species with 47,15 % of trees without defoliation signs. Very satisfactory status has been noted at spruce 41,17 %.

Fir appears to be one of the most endangered species where each third tree has been established without defoliation signs ,33,00 %. Poorer fir resistance is not a local phenomena , it appears as endangered species with appearance of defoliation throughout Europe.

Upoređenjem raspodjele otpornosti kod posmatranih četinarskih vrsta u Crnoj Gori primjetan je veoma sličan trend kod svih vrsta sa nešto većom ugroženošću jele što se veoma jasno može vidjeti sa ilustracije (grafikon 14).

After comparing distribution of resistance at observed coniferous species in Montenegro, we have noticed a very similar trend at all the species having the larger fir vulnerability, which can clearly be seen from illustration (Graph 14).

Grafikon 14/Graph 14.



Grafički prikaz stepena defolijacije četinara u 2010 godini./ Graphic overview of conifers defoliation level in 2010.

7.2. Dekolorizacija – 2010 godina

Definicija

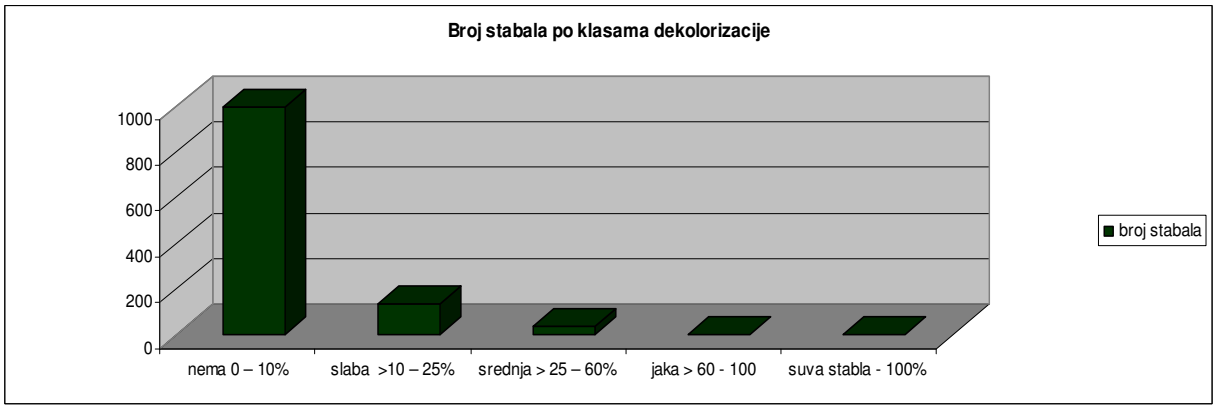
Promjena boje lišća (dekolorizacija) predstavlja indikator stanja kruna i zdravstvenog stanja biljke.
Na grafikonu 15. je prikazano učešće broja stabala bez obzira na vrstu, koje su zahvaćene određenom klasom dekolorizacije.

7.2. Decolorization – 2010

Definition

Changes of leaves color (decolorisation) presents the indicator of crown status and health plant condition.
Graph 15 presents the share of number of trees regardless to the species, that are caught by specific class of decolorisation.

Grafikon 15/Graph 15.



Ukupno učešće svih vrsta u odnosu na broj stabala po klasama dekolorizacije/ Total share of all the species compared to the number of trees, per decolorisation classes

Kod najvećeg broja posmatranih stabala (1000 stabala ili 85%) nije imalo promjena u boji lišća, dok je veoma mali broj stabala sa jakom promjenom boje lišća koja je zahvatila više od 60% asimilacione površine. Generalno gledajući pojava dekolorizacije je u Crnoj Gori znatno manje izražena od defolijacije.

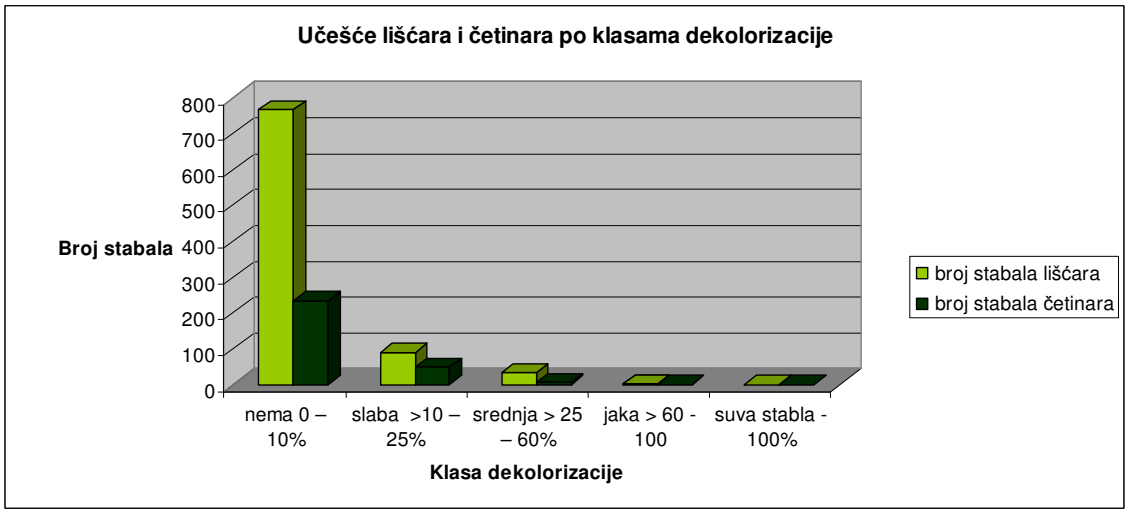
Učešće lišćarskih i četinarskih vrsta odnosa broja stabala po klasama dekolorizacije u Crnoj Gori u 2010 godini prikazano je u narednom grafikonu.

At the majority of observed trees (1000 trees or 85%) we did not see any changes in leaves color, while there was a very small number of trees with strong changes of leave color which covered more than 60% of assimilation area.

Generally speaking, phenomena od decolorisation in Montenegro is significantly less prominent than defoliation.

Share of broadleave and coniferous species, ratios between the number of trees per decolorisation classes in Montenegro in 2010 shall be presented in the following graph.

Grafikon 16/Graph 16.



Učešće lišćarskih i četinarskih vrsta u odnosu na broj stabala po klasama dekolorizacije/ Share of broadleave and coniferous species in relation to the number of trees per decolorisation classes.

Sa grafikona se može primjetiti da je i u slučaju lišćara i u slučaju četinara primjetan sličan trend rasporeda broja stabala po klasama dekolorizacije uzimajući u obzir različit apsolutni broj stabala i jasno se primećuje da je najveći broj stabala bez dekolorizacije ili sa slabom (čine 96,68% od ukupnog broja posmatranih stabala), dok je 3,23 % sa srednjim stepenom dekolorizacije i ostatak od 0,08% sa jakom dekolorizacijom.

It can be seen from the graph that in case of both the broadleaes and conifers there is the noticeable trend of distribution of number of trees per decolorisation classes , taking into account the different absolute number of trees, and it can be observed that the largest number of trees is without decolorisation or withy a weak one (they make 96,68% of total number of observed trees), while 3,23 % is with average decolorisation level and the rest of 0,08% with strong decolorisation.

7.2.1. Dekolorizacija lišćari

Struktura dekolorizacije kod lišćara prikazana je po najvažnijim vrstama tabelarno i grafički preko broja stabala i procenta dekolorizacije:

7.2.1. Decolorisation of broadleaves

Structure of delorisation of broadleaves has been presented as per the most important species in tables and graphs, according to the number of trees and percentage of decolorisation:

Tabela 13/Table 13.

Dekolorizacija		Lišćari								
		Grab obični	Maklen	Bijelograbić	Bukva	Crni jasen	Crni Grab	Cer	Prnar	Kitnjak
Nema0-10%	Br.stabala	54	30	37	246	96	44	88	32	85
	%	64,28	100,00	97,37	82,27	98,97	95,66	81,48	100,00	91,40
Slaba >10-25%	Br.stabala	18	-	1	34	1	1	20	-	8
	%	21,43	0,00	2,63	11,37	1,03	2,17	18,52	0,00	8,60
Umjerena >25-60%	Br.stabala	12	-	-	18	-	1	-	-	-
	%	14,29	0,00	0,00	6,02	0,00	2,17	0,00	0,00	0,00
Jaka >60 - <100%	Br.stabala	-	-	-	1	-	-	-	-	-
	%	0,00	0,00	0,00	0,34	0,00	0,00	0,00	0,00	0,00
Mrtvo drvo 100%	Br.stabala	-	-	-	-	-	-	-	-	-
	%	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Ukupno	Br.stabala	84	30	38	299	97	46	108	32	93
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Dekolorizacija lišćarskih vrsta u 2010 godini/ Decolorisation of broadleave species in 2010

Procentualno izraženo u relativnim vrijednostima prema gubitku boje lišća najveću otpornost su pokazali maklen i prnar gdje na 100% posmatranih stabala nije zapažena promjene boje asimilacionih organa. Takođe male su promjene uočene i kod crnog jasena gdje dekolorizacije nema na 98,97% i kod bjelograbića na 97,37%.

Stated in percentage and in relative values according to the leaves decolorisation the highest resistance was shown at maklen and kermes oak where at 100% of observed trees we have not noticed changes of color of assimilation bodies. We have also noticed small changes at black ash where at 98,97% there is no decolorization, and none at 97,37% of oriental hornbeam.

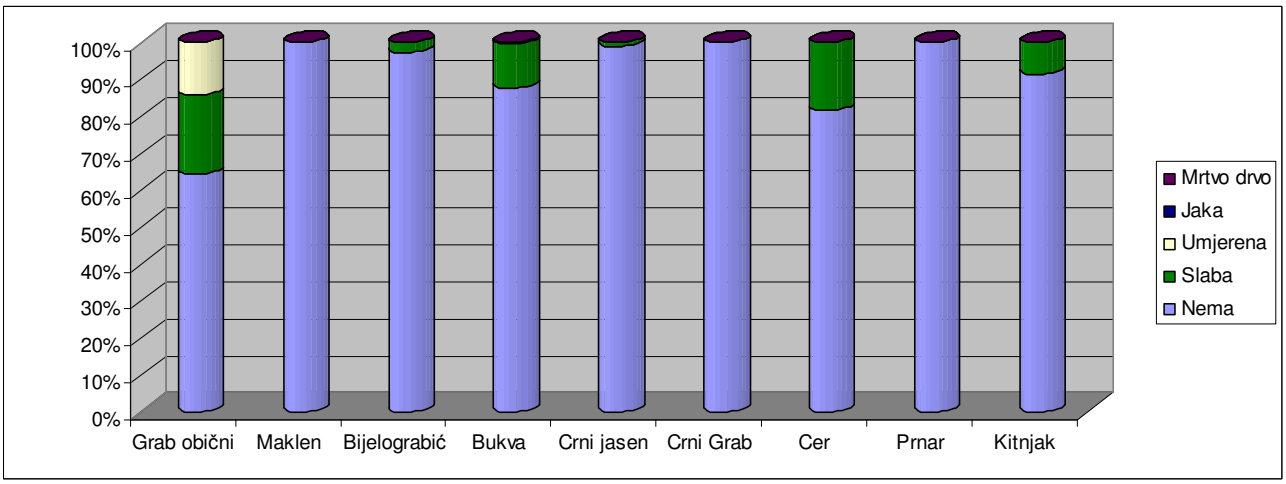
Kao najugroženija vrsta javlja se obični grab gdje je pojava da nema dekolorizacije zapažena na 64,28 % stabala dok se cer i bukva nalaze među srednje ugroženim sa 81,48% odnosno 82,27% stabala bez pojave promjene boje.

Dekolorizacija lišćara je u Crnoj Gori znatno manje izražena od defolijacije lišćara što se može jasno uočiti poređenjem grafikona defolijacije i dekolorizacije lišćara.

We have the appearance of common hornbeam as the most endangered species where we have noticed the phenomena of not having any decolorisation in 64,28 % of trees, while bitter oak and beech fall under medium endangered with 81,48%, that is 82,27% of trees without changes of colors.

Decolorisation of broadleaves in Montenegro is less prominent than defoliation of broadleaves, which can be clearly spotted by comparing the graphs of defoliation and decolorisation of broadleaves.

Grafikon 17/Graph 17.



Grafički prikaz stepena dekolorizacije lišćara na BIT u 2010 godini./ Graphic overview of broadleaves level of decolorisation in 2010.

7.2.2. Dekolorizacija četinari

Struktura dekolorizacije kod četinara prikazana je po najvažnijim vrstama tabelarno i grafički preko broja stabala i procenta dekolorizacije:

7.2.2. Decolorisation of conifers

Structure of decolorisation at conifers is presented according to the most important species in tables and graphs, through the number of trees and percentage of decolorisation:

Tabela 14/Table 14.

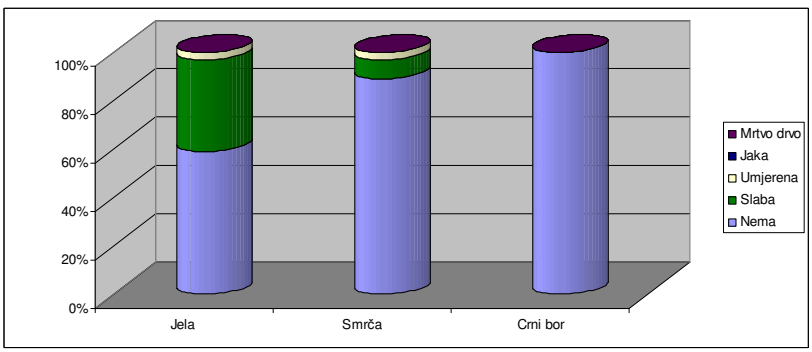
Dekolorizacija		Četinari		
		Jela	Smrča	Crni bor
Nema	Br.stabala	59	91	70
0-10%	%	59,00	89,21	100,00
Slaba	Br.stabala	38	8	-
>10-25%	%	38,00	7,84	0
Umjerena	Br.stabala	3	3	-
>25-60%	%	3,00	2,94	0
Jaka	Br.stabala	-	-	-
>60 - <100%	%	0	0	0
Mrtvo drvo	Br.stabala	-	-	-
100%	%	0	0	0
Ukupno	Br.stabala	100	102	70
	%	100%	100%	100%

Dekolorizacija četinarskih vrsta u 2010 godini/ Decolorisation of coniferous species in 2010

Posmatrano u relativnim vrijednostima prema podacima koji su dati tabelarno i grafički vidi se da kod četinara najveću otpornost prema gubitku boje iglica pokazuje crni bor gde na 100% posmatranih stabala nije zapažena promjene boje asimilacionih organa. Takođe manje su promjene uočene kod smrče gde dekolorizacije nema na 89,21%.
Najugroženiji četinar u Crnoj Gori u 2010 godini je jela sa svega 59,0% stabala bez ikakvih znakova defolijacije. Jela se inače pokazala u cijeloj Evropi kao ugrožena vrsta na pojavu sušenja.
Primjetno je da je dekolorizacija četinara znatno manje izražena od defolijacije četinara (grafikon 18).

Observed in relative values according to the data provided in tables and graphs it can be seen that when speaking about conifers the black pine shows highest resistance to decolorisation of needles , where at 100% of observed trees we did not notice changes in color of assimilation bodies. Also, smaller changes have been noticed at spruce where there is no decolorisation on 89,21%.
The most vulnerable conifer in Montenegro in 2010 is fir, with only 59,0% of trees without any defoliation signs. Anyway, fir has appeared to be the species vulnerable to drying phenomena, throughout Europe.
It is noticeable that decolorisation of conifers is less prominent then defoliation of conifers. (Graph 18).

Grafikon 18/Graph 18.



Grafički prikaz stepena dekolorizacije četinara na BIT u 2010 godini./ Graphic overview of decolorisation level of conifers in bio indication plots in 2010.

7.3. Oštećenja

Definicije

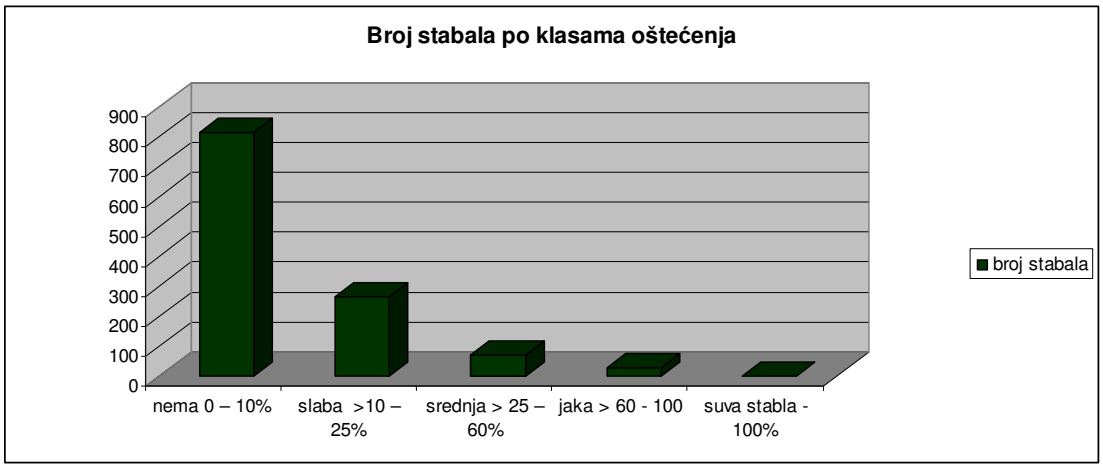
Oštećenje se definiše kao mijenjanje ili narušavanje dijela stabla, što može imati nepovoljan uticaj na njegovu sposobnost da vrši svoje funkcije. Oštećenje proizilazi iz ocjene defolijacije i dekolorizacije i iz njihovih veličina koje su razvrstane po klasama. Poređenjem ovih vrijednosti prema priloženoj tabeli (tabela 5) i ukrštanjem njihovih veličina proizlaze različiti stepeni oštećenosti lišćarskih i četinarskih vrsta koji su indentifikovani u Crnoj Gori na posmatranim površinama. Njegova ocjena je izvedena kao rezultirajuća klasa i predstavlja jedan od najvažnijih uvida u zdravstveno stanje posmatranih vrsta.
Učešće broja stabala bez obzira na vrstu na posmatranim površinama razvrstano po klasama oštećenja dato je na grafikonu 19.

7.3. Damages

Definitions

Damage shall be defined as changing or damaging a part of the tree, which may have an unfavorable impact on its ability of performing its functions. Damage shall result from evaluation of defoliation and decolorisation and from their sizes distributed throughout classes. After comparing these values according to the table (table 5) and crossing their sizes we shall have the resulting different levela of damage in broadleave and coniferous species in Montenegro in the observed areas. Its evaluation was done as the resulting class and presents one of the most important insights into the health status of observed species.
Share of number of trees, regardless to the species in observed areas and classified in damage classes is given in Graph 19.

Grafikon 19 / Graph 19.



Ukupno učešće svih vrsta u odnosu na broj stabala po klasama oštećenja/ Total share of all the species in relation to the number of trees per damage classes

Sa grafikona se vidi da je najveći broj stabala (bez obzira na vrstu) obuhvaćenih posmatranjima (814) bez oštećenja,

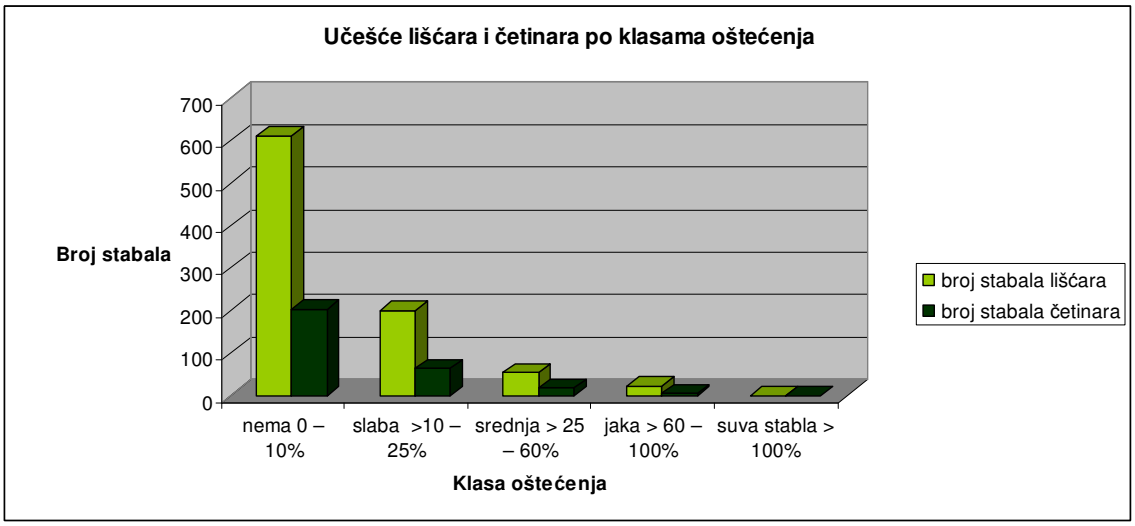
It can be seen from the Graph that the largest number of trees (regardless to the species) included in observation (814) are without damages,

dakle u klasi (do 10 %) ili sa slabim intenzitetom oštećenja (264 stabla) u klasi od 10 do 25 %, dok je veoma mali broj stabala u klasi iznad 60%, svega 28 stabala sa vidljivim oštećenjem. Učešće lišćarskih i četinarskih vrsta odnosa broja stabala po klasama oštećenja u Crnoj Gori u 2010 godini prikazano je na grafikonu 20.

thus, in class (of up to 10 %) or with a low intensity damage (264 trees) in class from 10 to 25 %, while a small number of trees is in class above 60%, total of 28 trees with visible damages.

Share of broadleave and coniferous species in relation to the number of trees per damage classes in Montenegro, in 2010, is presented in Graph 20.

Grafikon 20/Graph 20.



Učešće lišćarskih i četinarskih vrsta u odnosu na broj stabala po klasama oštećenja / Share of broadleave and coniferous species in relation to the number of trees per damage classes.

7.3.1. Oštećenja lišćari

Vrijednosti učešća različitih kategorija oštećenosti kod najzastupljenijih lišćarskih vrsta u Crnoj Gori date su na sledećem tabelarnom i grafičkom pregledu

7.3.1. Damages of broadleaves

Share values of different damage categories at most spread broadleave species in Montenegro are given in the following tabular and graphic overview.

Tabela 15/Table 15.

Oštećenja		Lišćari								
		Grab obični	Maklen	Bijelograbić	Bukva	Crni jasen	Crni Grab	Cer	Prnar	Kitnjak
Nema0-10%	Br.stabala	43	19	35	208	67	35	80	32	49
	%	51,19	63,33	92,10	69,56	69,07	76,10	74,07	100,00	52,68
Slaba >10-25%	Br.stabala	21	11	3	43	29	9	28	-	43
	%	25,00	36,67	7,90	14,38	29,90	19,56	25,93	0,00	46,24
Umjerena >25-60%	Br.stabala	17	-	-	29	1	1	-	-	1
	%	20,24	0,00	0,00	9,70	1,03	2,17	0,00	0,00	1,08
Jaka >60 - <100%	Br.stabala	3	-	-	19	-	1	-	-	-
	%	3,57	0,00	0,00	6,36	0,00	2,17	0,00	0,00	0,00
Mrtvo drvo 100%	Br.stabala	-	-	-	-	-	-	-	-	-
	%	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Ukupno	Br.stabala	84	30	38	299	97	46	108	32	93
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Oštećenja lišćara BIT 2010/ Damages of broadleaves in bio indication plots in 2010

Posmatrajući oštećenja lišćarskih vrsta , izražena u relativnim vrijednostima primjetno je da se kao najotpornija vrsta pokazao hrast prnar (Quercus coccifera) gdje ni na jednom stablu nisu zapažena oštećenja. Veliku otpornost je pokazao bjelograbić sa 92,10% stabala bez znakova oštećenja.

Kao najosjetljivije vrste lišćara pokazali su se obični grab i kitnjak, gdje je polovina posmatranih stabala bez oštećenja (obični grab 51,19% i kitnjak 52,68%) dok se bukva po osetljivosti , nalazi na sredini sa 69,56% stabala bez ikakvih znakova oštećenja.

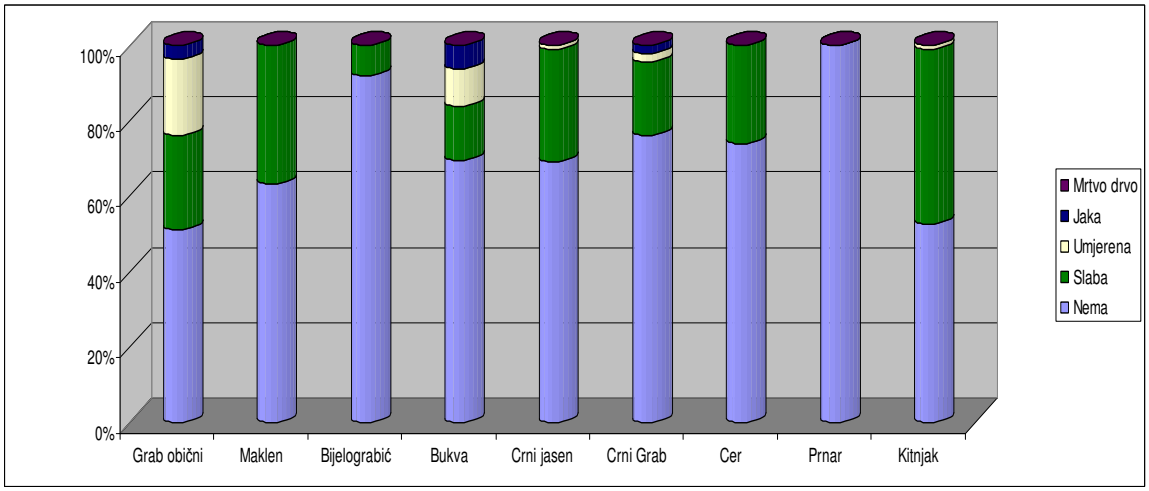
After observing the damages of broadleave species , expressed in relative values it is noticeable that kermes oak has appeared as one of the most resistant species (Quercus coccifera) where damages have not been spotted at any of the trees. High resistance was shown by oriental hornbeam with 92,10% of trees without damage signs.

Common hornbeam and sessile flowered oak have appeared as the most sensitive broadleave species, where half of the observed trees have been without any damages (common hornbeam 51,19% and sessile flowered oak 52,68%) while according to the sensitivity beech is in the middle, with 69,56% of trees without any damage signs.

Veličina oštećenja kod lišćarskih vrsta proporcionalno se nalazi na sredini između defolijacije i dekolorizacije što je moguće uočiti poređenjem grafičkih pregleda ovih pojava (grafikon 21).

Size of damages at broadleave species is proportionally located in the middle, between defoliation and decolorisation, which is possible to notice by comparing graphic overviews of these phenomena. (Graph 21).

Grafikon 21/graph 21.



Prikaz stepena oštećenja lišćara na BIT u 2010 godini/ Overview of level of broadleaves damage in bio indication plots in 2010

7.3.2. Oštećenja četinari

Vrijednosti učešća različitih kategorija oštećenosti kod najzastupljenijih četinarskih vrsta u Crnoj Gori date su na sledećem tabelarnom i grafičkom pregledu

7.3.2. Damages of broadleaves

Values of share of different categories of damages at most spread coniferous species in Montenegro are given in the following tabular and graphic overview.

Tabela 16/Table 16.

Oštećenja		Četinari		
		Jela	Smrča	Crni bor
Nema	Br.stabala	54	80	57
0-10%	%	54,00	78,43	81,43
Slaba	Br.stabala	32	16	13
>10-25%	%	32,00	15,69	18,57
Umjerena	Br.stabala	11	4	-
>25-60%	%	11,00	3,92	0,00
Jaka	Br.stabala	3	2	-
>60 - <100%	%	3,00	1,96	0,00
Mrtvo drvo	Br.stabala	-	-	-
- 100%	%	0,00	0,00	0,00
Ukupno	Br.stabala	100	102	70
	%	100%	100%	100%

Oštećenja četinara BIT 2010/ Damages of conifers in bio indication plots 2010

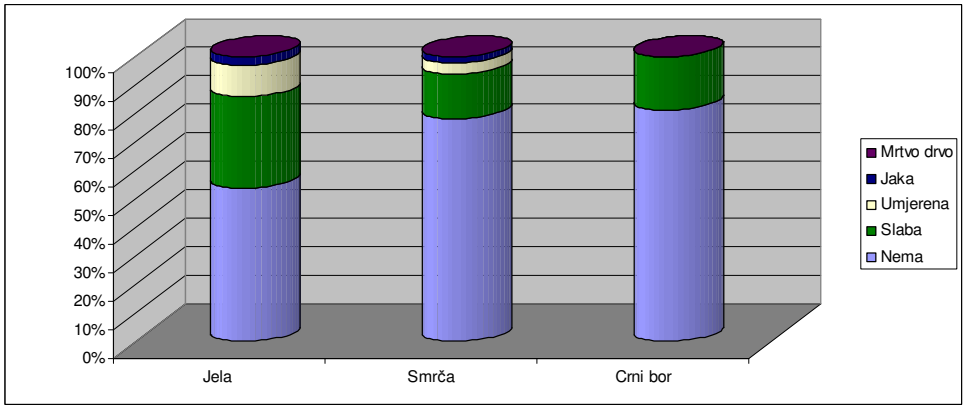
Kod četinara najmanje pojave oštećenja zabilježene su kod crnog bora gde na 81,43% posmatranih stabala nema oštećenja dok je približna situacija i sa smrčom koja je nešto osetljivija sa 78,43% . Kao najosjetljivija se pokazala jela sa 46,00% stabala sa raznim stepenima oštećenja.

Generalno posmatrajući, raspodjela oštećenja analiziranih četinarskih vrsta dosta sliči raspodjeli dekolorizacije četinara što se objašnjava činjenicom da kod četinara iglice dugo ostaju na stablu i posle promjene boje, te da pojava dekolorizacije nije praćena pojavom defolijacije istog intenziteta. Grafički prikaz oštećenja na najvažnijim vrstama četinara u Crnoj Gori dat je pregledno na grafikonu 22.

At conifers, the smallest damage phenomena have been recorded at black pine, where at 81,43% of observed trees there have been no damages, while the similar situation , slightly more sensitive, is with spruce with 78,43% . Fir has turned out to be the most sensitive with 46,00% of trees with different levels of damage.

Generally looking, distribution of damages at reviewed coniferous species is very similar to distribution of decolorisation of conifers, which is explained by the fact that at conifers needles stay on the tree for a long time even after changing the colour, and the phenomena of decolorisation is not followed by defoliation phenomena of the same intensity. Graphic overview of damages in the most important coniferous species in Montenegro is given in Graph 22.

Grafikon 22. Prikaz stepena oštećenja četinara na BIT u 2010 godini /Graph 22. Overview of the damage level of conifers in bio indication plots in 2010



8. Sumarna ocjena defolijacije, dekolorizacije i oštećenja u 2010. godini

Uporedna analiza defolijacije, dekolorizacije, kao i njihove kombinovane ocjene kod četinara i lišćara, predstavljena je u tabeli 17. i na grafikonu 23 u apsolutnim i relativnim odnosima.

8. Summarized evaluation of defoliation, decolorisation and damages in 2010.

Comparative analysis of defoliation, decolorisation and their combined evaluation at conifers and broadleaves is provided in Table 17 and in the Graph 23 in absolute and relative ratios.

Tabela 17 / Table 17.

		Sumarna ocjena defolijacije, dekolorizacije i oštećenja					
		Defolijacija		Dekolorizacija		Oštećenja	
		Lišćari	Četinari	Lišćari	Četinari	Lišćari	Četinari
Nema0-10%	Br.stabala	336	116	766	234	611	203
	%	37,84	40,27	86,26	81,25	68,81	70,49
Slaba	Br.stabala	318	120	89	48	201	63
>10-25%	%	35,81	41,67	10,02	16,67	22,63	21,88
Umjerena	Br.stabala	227	52	32	6	53	17
>25-60%	%	25,56	18,06	3,60	2,08	5,97	5,90
Jaka	Br.stabala	7	-	1	-	23	5
>60 -<100%	%	0,79	0,00	0,11	0,00	2,59	1,73
Mrtvo drvo	Br.stabala	-	-	-	-	-	-
100%	%	0,00	0,00	0,00	0,00	0,00	0,00
Ukupno	Br.stabala	888	288	888	288	888	288
	%	100%	100%	100%	100%	100%	100%

Sumarna ocjena defolijacije, dekolorizacije i oštećenja / Summarized evaluation of defoliation, decolorisation and damages

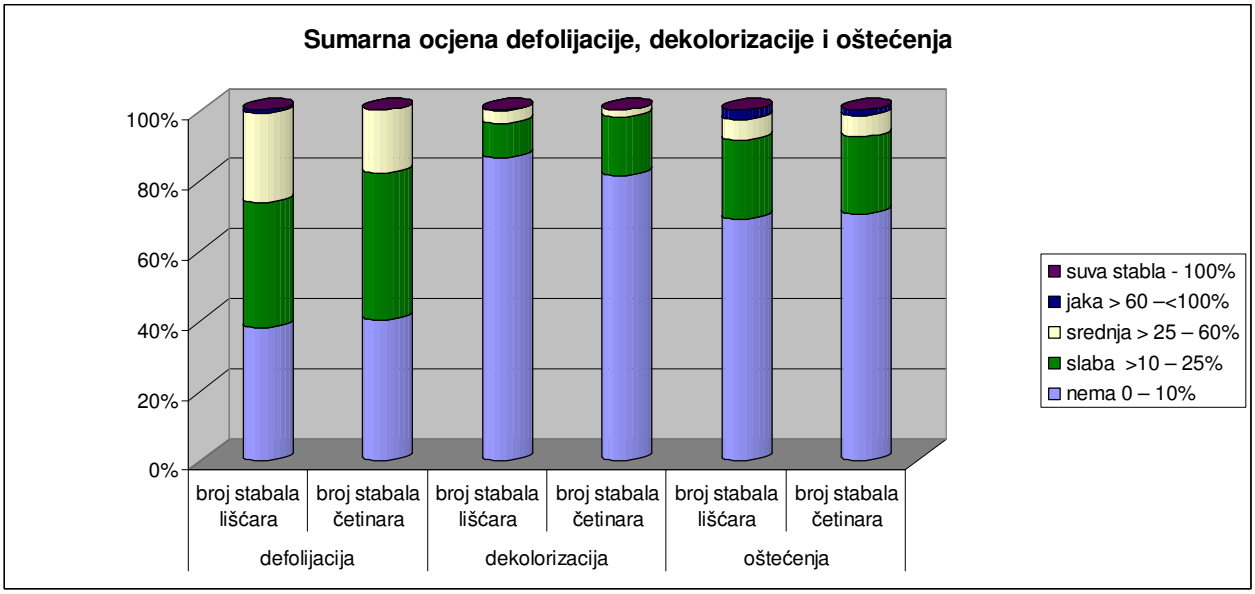
Može se uočiti da je defolijacija kod lišćara i četinara podjednako zastupljena, ali je i kod jednih i kod drugih duplo učestalija od dekolorizacije.
Lišćari imaju jače izraženu defolijaciju zbog svojih bioloških karakteristika da odbacuju lišće svake godine, zbog čega su kod njih ova oštećenja učestalija. Ova karakteristika se nije mnogo odrazila na kombinovanoj procjeni defolijacije i dekolorizacije koja je iskazana kroz ukupna oštećenja gde je

It can be perceived that defoliation is equally present at both conifers and broadleaves, but it is twice more frequent at both of them than decolorisation.
Broadleaves have more prominent defoliation because of their biologic characteristics of rejecting leaves each year, which is the reason these damages are more frequent at them. This characteristics did not reflect much on combined assessment of defoliation and decolorisation which is stated through total

situacija kod lišćara i kod četinara približno ista u relativnim iznosima.

damages, where situation at broadleaves and conifers is approximately the same in relative amounts.

Grafikon 23/Graph 23.



Prikaz sumarna ocjena defolijacije, dekolorizacije i oštećenja/ Overview of summarized evaluation of defoliation, decolorisation and damages

9. Zaključna razmatranja

Među štetnim agensima u šumskim ekosistemima konstantovani su i brojni prouzrokovači bolesti, štetočine, kao i uzročnici abiotičkog i antropogenog porijekla. Sve grupe uzročnika po metodologiji koja je u primjeni u istraživanju na Bioindikacijskim tačkama su svrstane u grupe prema sledećoj tabeli:

9. Final considerations

Among harmful agents within forest eco systems there are also many causes of diseases and pests, as well as causes of abiotic and antropogenous origin. According to the methodology that is applied within the research in Bio indication plots, all the groups of causes have been classified in groups, as per the following table:

Tabela 18 / Table 18.

Grupa uzročnika / Group of agents
Divljač i stoka / Wildlife and livestock
Insekti / Insects
Gljive / Fungi
Abiotički faktori / Abiotic origin
Uticaj čovjeka / Human influence
Požar / Forest fire
Polutanti / Pollutants
Ostalo / Other
Faktor ustanovljen ali neindetifikovan) / established but unknown factor

Grupe uzročnika po ICPF metodologiji/ Groups of causes according to the ICPF methodology

Uzročnici biološkog porijekla kao što su divljač, insekti i gljive su prateći organizmi prirodnih ekosistema i njih je u normalnim uslovima moguće kontrolisati. Jedino pri uslovima pojave prenamnoženja nekog biotičkog faktora remeti se prirodni sklad i te pojave u velikoj mjeri utiču na zdravstveno stanje šumskog drveća. Biološke štetne bolesti se nazivaju još i infektivne bolesti jer se mogu prenijeti na okolne zdrave biljke.

Causes of biological origin such as game, insects and fungi, are anciliary organisms of natural eco systems and they are possible to control under normal conditions. Only under the conditions of excess multiplication of a biotic factor the natural harmony shall be disturbed, and those phenomena shall to a significant extent have impact on health status of forest trees. Biologic harmful diseases are also called infectuous diseases because they can be transferred to the surrounding healthy plants.

Infektivne bolesti izazvane parazitnim gljivama nazivaju se (mikoze), bakterijama (bakterioze), virusima (viroze), mikroplazmatičnim organizmima, algama (fikoze), lišajevima (lihenoze) a mogu biti izazvane i nematodama i parazitnim cvetnicama.

Od svih ovih uzročnika najveći značaj imaju mikoze tj. bolesti izazvane patogenim gljivama.

Insekti kao štetočine na biljkama posebno su opasni po četinarske šume i najveće štete pričinjavaju potkornjaci posebno kada se jave u gradacijama.

Pojave gradacija, polucija ili prenamnoženja se ne dešavaju u dugim vremenskim periodima, prevashodno jer se konstantnim monitoringom i blagovremenom reakcijom šumarskih službi za zaštitu, pokušava spriječiti njihovo nastajanje. Karakteristika pojave ovih uzročnika je što se javlja najčešće na ograničenom prostoru (lokalno ili regionalno), njihova pojava je nagla i traje ograničen vremenski period.

Uzročnici abiotičkog porijekla posebno polutanti iz vazduha djeluju na mnogo kompleksniji način. Ova oštećenja se nazivaju neinfektivna, a ovdje se ubrajaju svi poremećaji i oštećenja koja nastaju pod uticajem nepovoljnih klimatskih i edafskih faktora. Ove bolesti su uzrokovane aerozagađenjem, suviše niskom ili suviše visokom temperaturom, nedostatkom ili prevelikom vlagom zemljišta, prevelikom kisjelošću ili bazičnošću zemljišta, mehaničkim dejstvom vjetra, snijega, grada, groma isl. Ovi uzročnici za razliku od uzročnika biološkog porijekla ne mogu se kontrolisati mjerama gazdovanja ili mjerama zaštite.

Lanac promjena koji izazivaju u ekosistemu mijenja sastav vazduha, zemljišta čak i patogena do te mjere da utiču na prisustvo nekih patogena ili štetočina što može da bude čak poželjno jer i oni postaju indikatori kvaliteta sredine.

Infectuous plants caused by parasite fungi are also called (mycosis), bacteria (bakteriosis), viruses (virosis), micro plasmatic organisms, algae (ficosis), lichens (lichenosis) and may be caused by nematodes and parasite flowering plants.

Of all of these causes , the most significant are mycosis, that is, diseases caused by pathogenous fungi. Insects as pests on the plants are especially dangerous for coniferous forests and the largest damages are caused by bark beetles, especially when appearing in gradations.

Appearance of gradations, contaminations or excess multiplication do not happen in other time periods, primarily bacause by application of permanent monitoring and timely reaction of forest protection services their appearance is tried to be prevented. Characteristics of appearance of these causes is that is appears more frequently in a restricted area (locally or regionally), their appearance is sudden and lasts for a restricted period of time.

Causes of abiotic origin, especially air pollutants, act in a more complex manner. These damages are also called not infectuous ones, and here we include all the disturbances and damages appearing under the impact of unfavourable climate and edaphic factors. These diseases are cause dby aero pollution, extremely low or extremely high temperature, lack or extreme soil humidity, excess acidity or alkalinity of soil, mechanical effect of wind, snow, hail, thunder, etc. Contrary to the biological origin causes, these ones cannot be controlled by management measures or protection measures.

The chain of changes they induce in ecocostem is changing the composition of air, soil and even pathogens to the extent that they impact the presence of certain pathogens or pests, which may even be desirous because they also become indicators of environmental quality.

Kontinuirano zagađivanje šuma imisijama štetnih materija djeluje veoma nepovoljno na biljke, Neke od toksičnih materija djeluju tako što se akumuliraju u biljkama i ne primjete se do izvjesnog praga tolerancije biljke dok druge direktno toksično djeluju na biljku i izazivaju promjene u njenoj ćeliskoj strukturi asimilacionih organa pa i u cijeloj biljci.

Kompleksno djelovanje ovih stresora je i takvo da abiotički faktori utiču na imunitet biljaka što ih predisponira za napad nekih biotičkih faktora sredine, koji u sukcesiji nastavljaju proces sušenja do potpunog propadanja (umiranja) šuma.

Zbog složenosti djelovanja, zajedničkog nadovezivanja i kompleksnosti faktora kao i zbog različitih karakteristika pojedinih biljnih vrsta i različitog stepena otpornosti različitih sorti i u okviru iste vrste nije moguće jednostavno objasniti proces i izazivače umiranja šuma i dati jednostavan odgovor koji bi predstavljao rješenje problema. Najčešća greška kod posmatranja reakcije biljke na kompleksno djelovanje faktora abiotičke i biotičke prirode je navođenje na pogrešan zaključak da je za sušenje šuma glavni krivac primarni faktor kao prvi uzrok nastalih posledica ili da je poslednji agens sukcesije najznačajniji.

Posebne vrste šteta nastaju od požara kada biva uništen dio ili čitavo stablo i šteta je nastala na većoj površini. Posebno su štetni visoki požari (gore krošnje šumskog drveća) i kombinovani niski i visoki požari kada nastaje šteta i u krošnji i u prizemnom sloju. Ukoliko je oštećen dio stabla te biljke bivaju podložnije napadu sekundarnih štetočina i bolesti.

Continuous pollution of forests by emission of harmful matters has a very detrimental effect to the plants. Some of the toxic matters act in the manner they accummulate in plants and are not perceived until the certain tollerance limit of the plant , while others directly toxically act on the plant and cause changes within its cell structure of assimilation organs, and in the entire plant.

Complex actions are such that abiotic factor has impact on plant's immunity, which is predisposing it for attacks of some biotic environmental factors which continue the drying process in the succession, until total decay (dying) of forests.

Because of the complexity of actions, joint contcatenation and complexity of factors and because of the different characteristics of individual plant species and different degree of resistance of different sorts within the same species it is not possible to explain the process in a simple manner and causes of dying of forests and provide a simple answer as a solution of the problem. The most frequent mistake at observing the reaction of plant to complex actions of abiotic and biotic factors is allegating to the wrong conclusion that as far as the drying of forests is concerned the main perpetrator is the primary factor, as the first cause of incurred consequences, or that the last agent of succession is the most significant one.

Special types of damages cause from fire, when a part or entire tree is destroyed and the damage is incurred in a larger area. Especially detrimental are high fires (forest trees crowns are burning) and combined low and high fire when we have the damages in both the crown and ground storey. If a part of the tree is damaged, those plants become more susceptible to attacks of secondary pests and diseases.

Ovakve štete su uzrokovane rjeđe prirodno (udar groma) i najčešće nepažnjom ili čak namjerom čovjeka

Such damages are rarely caused naturaly (thunderstorm) and more frequently by negligence or even intentionally.

Dobrim mjerama predohrane (uklanjanje lako zapaljivih materijala iz šume, izrada protivpožarnih prepreka, nadzor i propaganda), mjerama presupresije (organizacione i tehničke pripreme za rano otkrivanje i lokalizovanje požara u kritičnim periodima) kao i organizacijom protiv požarne službe ove štete je moguće redukovati na znatno manju mjeru.

By good measures of preservation (elimination of easily flammable materials from forests, manufacturing fire fighting barriers, supervision and propaganda), measures of presupression (organizational and technical preparations for early detection and localization of fire in critical periods) as well as by organization of fire fighting service, these damages shall be possible to reduce to a significantly lower level.

Požari izazivaju velike štete u Crnoj Gori na šumama naročito u periodu ljeta (jul –avgust) kada su temperature maksimalne i to posebno u slučaju dužih sušnih perioda. Na požare su posebno osjetljive vrste sa tanjom korom i četinari zbog sadržaja smole.

Uticaj čovjeka na ekosistem šuma je direktan i indirektan. Direktan uticaj je kroz nesavjesno ponašanje prema šumi, ilegalne sječe ili sječe na velikoj površini, oštećenja nastala prilikom obaranja i prilikom izvlačenja posječene drvne mase kao i prejakim zahvatima koji ugrožavaju stabilnost šumskih sastojina, dok je posredan uticaj kroz zagađenje zemljišta i vazduha.

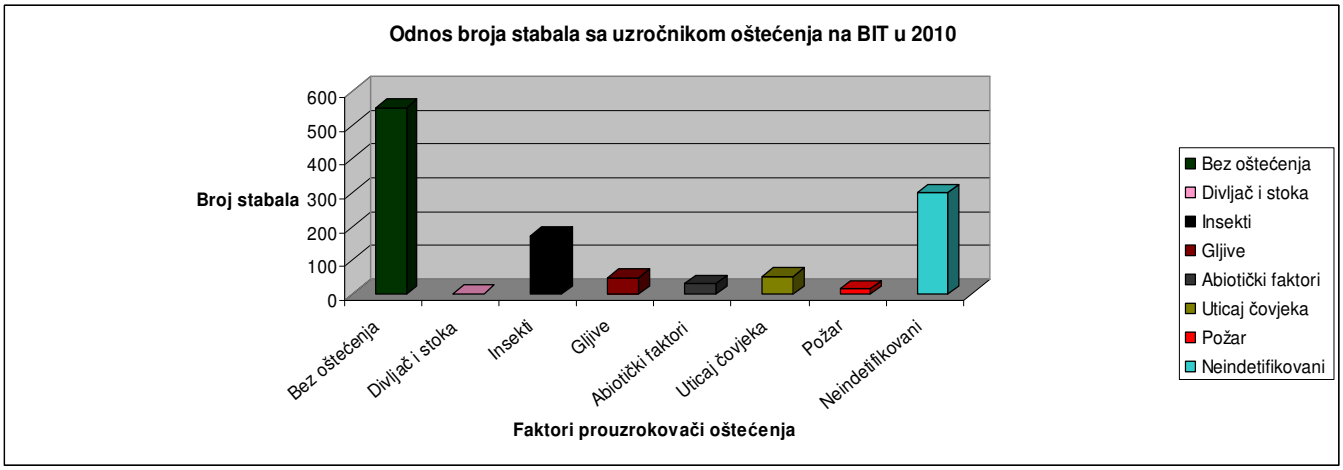
Na stablima su prilikom posmatranja konstatovana različita oštećenja prema tipovima i vrstama uzročnika.

Fire cause huge damages in Montenegrin forests, especially duing summer (july –august) when temperatures are maximum, especially in case of longer dry periods. Species having thinner bark and conifers because of their resin content are especially susceptible to fire.

Human impact on forest ecosistem can be felt both as direct and indirect. Direct impact is through negligent treatment of forests, illegal feling or harvesting in a large area, damages incurred when felling or skidding of harvested wood mass and also by excessive grips endangering the stability of forest eco systems, while we have the indirect impact through pollution of soil and air.

During the observations, the various damages as per the types and kinds of causes were established on the trees.

Grafikon 24/Graph 24.



Odnos broja stabala i tipa oštećenja na BIT u 2010 godini/ Ratio of the number of trees and type of damage in bio indication plot in 2010.

Sa grafikona je uočljivo da je najveći broj stabala (551 stablo) ipak bio bez ikakvih oštećenja, što predstavlja 46,85 % od ukupnog broja posmatranih stabala, dakle gotovo polovina stabala je bez oštećenja dok je druga polovina sa nekom vrstom oštećenja. Na velikom broju stabala registrovano je oštećenje, ali nije bilo moguće sa sigurnošću indetifikovati primarnog uzročnika (300 stabala ili 25,51%) čemu se mora pokloniti pažnja u narednim istraživanjima.

It is visible from the graph that the largest number of trees (551 tree) has been without any damages, which represents 46,85 % of total number of observed trees, thus, almost half of the trees have been without damages, while other half has been with a kind of damage. The damage has been registered in a large number of trees, but it has not been possible to identify the cause for certain (300 trees or 25,51%) which must be paid to attention in future research.

Od biotičkih činilaca, najčešći prouzrokovači oštećenja bili su insekti i gljive. Pojava insekata i oštećenja koja prouzrokuju primjećena je na 174 stabla (14,80%) dok je pojava biljnih bolesti primjećena na 49 stabala (4,17%).

Out of biotic factors, the most frequent causes of damage were insects and fungi. Phenomena of insects and damages they cause was noticed on 174 trees (14,80%) , while phenomena of plant diseases was noticed on 49 trees (4,17%).

Od abiotičkih činilaca registrovana su oštećenja od klimatskih ekstrema (mrazopucine i oštećenja lista, vetrolomi i vetroizvale, snegolomi i snegoizvale i upale kore na 39 stabala.

As far as abiotic factors are concerned there were damages from climate extremes (frost cracks and leaves damages, windthrows, snow slides and snow throws and bark blisters on 39 trees.

Na BIT konstantovana su i oštećenja antropogenog porijekla (najčešće prilikom izvlačenja i rušenja stabala) i ove pojave su zapažene na 53 stabla.

Oštećenja nastala šumskim požarima primjećena su na 16 stabala što predstavlja učešće od 1,36% što je veoma zadovoljavajući pokazatelj, ali uzimajući u obzir da je 2010 godina bila obilježena ekstremno velikom količinom padavina i pojavom poplava na ovaj podatak će se morati obratiti pažnja u narednim istraživanjima.

Human caused damages were also stated (most frequently after skidding and felling of trees) and these phenomena were perceived on 53 trees.

Damages caused by forest fires were perceived on 16 trees, which represents the share of 1,36% , which is a very satisfying indicator, but taking into account that 2010 was marked by extremely large amount of precipitations and floods this data will have to be taken into account within the future researches.

9.1. Oštećenja biotičkog porijekla

Oštećenja biotičkog porijekla primjećena su na ukupno 225 stabala što čini 19,13% ukupnih oštećenja, dakle gotovo svako 5 posmatrano stablo je sa oštećenjem nastalim biotičkim porijeklom. Najmanje je učešće oštećenja u apsolutnim vrijednostima od biotičkih oštećenja su ona koja su prozrokovala divljač i stoka i ta vrsta oštećenja je primjećena svega na 2 stabla dok je najveće učešće oštećenja koja prouzrokuju insekti. Oštećenja su primjećena i na lišćarskim i na četinarskim vrstama drveća i ravnomjerno su raspoređena u odnosu na učešće vrsta kao i u odnosu na ukupni broj posmatranih stabala.

9.1. Damages of biotic origin

Biotic origin damages were perceived on total of 225 trees, which makes 19,13% of total damages, thus, almost each observed tree had a damage caused by biotic origin. The smallest share of damages in absolute values of biotic damages belongs to those caused by game and cattle and that type of damages had been noticed only on 2 trees, while the largest share of damages is the one caused by insects. Damages were also perceived on broadleave and coniferous tree species and are equally distributed in relation to the share of species and to the total number of observed trees.

9.1.1.Oštećenja od insekata

U istraživanjima štetne entomofaune otkriven je veliki broj insekata koji žive na raznim organima drvenastih biljaka.

Prema dijelu biljke koji nastanjuju i gdje se hrane, mogu se podijeliti u tri osnovne grupe: insekti koji se hrane sisajući biljne sokove iz lista i grana, insekti koji se hrane tkivima lista, bilo da žive slobodno ili skriveno u minama i galama i insekti koji žive i hrane se u drvetu.

Kada govorimo o insektima koji se javljaju na šumskom drveću prema ICPF metodologiji razvrstani su u sledeće grupe (tabela 19, 20).

9.1.1. Damages caused by insects

In the researches of etnomofauna we have discovered a large number of insects living in different organs of woody plants.

According to the part of the plant they live in and feed, they can be divided into three main groups: insects that feed by sucking plant juices from leaves and branches, insects fed by leave tissues, whether living freely or hidden in mine and gals and insects living and fed in the tree.

When speaking about the insects occuring on forest trees, according to the ICPF methodology they are classified into following groups (Table 19, 20).

Tabela 19/Table 19.

Tabela - Šifre za grupu agenasa 200 (Insekti): četinari

ČETINARI

Grupa agenasa	Šifra	Klasa	Šifra	Glavne vrste	Šifra	Pogođeni genus	Simptomi
INSEKTI	200	Uzroci defolijacije	210	*Acantholyda* sp.		*Pinus*	Zasjena napravljena od svilenkastih vlakana i fras na iglicama
				Brachonyx pineti		*Pinus*	Fine tačke sa centralnom rupom na iglicama i prisustvo malih rupa u omotaču
				Brachyderes suturalis		*Pinus*	Uništene iglice koje formiraju debelu ivicu
				Diprion pini		*Pinus*	Ljetnje defolijacije. Lažne gusjenice, zelenkaste sa braon-narandžastom glavom. Jajašca na obodima iglice i kokonima u zemljištu
				Gelechia senticetella		*Juniperus, Cupressus*	Svilenkaste niti u suvim grančicama
				Lymantria dispar		*Larix, Picea, Pinus*	Pojedene iglice; gusjenice sa dugim dlačicama, promjenljive žute do crne boje sa karakterističnim duplim redom plavih i crvenih tačkica na leđima
				Bupalus piniarius		*Pinus*	Jajašca položena u pukotine kore. Nedavno rođene gusjenice položene u linije na deblu. Ljetnje defolijacije
				Choristoneura murinana		*Abies*	
				Cephalcia lariciphila		*Larix*	
				Cephalcia abietis		*Picea*	
				Dendrolimus pini		*Pinus*	
		Sipci na deblu, granama i grančicama (uključujući insekte koji kopaju po pupoljcima)	220	*Dioryctria sylvestrella*		*Pinus*	Rupa od bušenja sa djelićima smole na deblu zajedno sa piljevinom i crvenkastim ostacima izmeta
				Hylobius abietis		*Pinus*	Plitki ugrizi na tankim grančicama i mladim borovima
				Ips acuminatus		*Pinus*	Zvjezdasti sistem galerija ispod kore. Oštećena stabla se nalaze u grupama koje su blizu jedna drugoj. Stabla umiru u ljeto.
				Ips sexdentatus		*Pinus*	Zvjezdasti sistem galerija ispod kore. Oštećena stabla u grupama koja su blizu jedna drugoj. Stabla umiru u ljeto. Odrasli je veći od odraslog Ips sexdentatus
				Ips typographus		*Picea*	Potkornjak, moljac, ubija crvenu smrču, opasan za cijelu šumu
				Magdalis sp.		*Pinus*	Probušeni pupoljci i mlade grančice. Suvi i šuplji mladi izbojci
				Orthotomicus sp.		*Pinus*	Dugačke zvjezdaste galerije ispod kore. Odrasli veoma mali
				Phaenops cyanea		*Pinus*	Oštećenja od larve u dijelu debla sa tankom korom, galerije starijih larvi sa „oblakom" prašine od bušenja, potkornjak tamno plavi sa zelenim sjajem
				Pissodes castaneus		*Pinus*	Jako male rupe sa kapima smole u pupoljcima i izbojcima. Galerije ispod kore i pupation komore sa debelim sječkama
				Pityogenes chalcographus		*Picea, Larix, Abies, Pseudotsuga*	
				Pityokteines curvidens		*Abies*	
				Retinia resinella		*Pinus*	Debela i velika izraslina smole. Šuplja iznutra, zajedno sa ostacima u malim granama ili pupoljcima
				Semanotus laurasi		*Juniperus*	Galerije i komore pupation u granama i grančicama. Crvenkaste male površine u kruni
				Tomicus destruens		*Pinus*	Suve i šuplje gornje grančice. Mrvice smole na deblu sa ulaznom rupom. Galerije ispod krune u obliku riblje kostiju. Stabla umiru u proljeće
		Insekti koji buše pupoljke	230	*Rhyacionia buoliana*		*Pinus*	Šuplji pupoljci i mladi izbojci (izbojci u obliku bajoneta)
				Rhyacionia duplana		*Pinus*	Šuplji pupoljci i mladi izbojci (izbojci u obliku bajoneta) zajedno sa mrvicama smole
		Insekti koji buše plodove	240	*Dioryctria mendacella*		*Pinus*	Rupe od moljaca nepravilnog oblika sa smolom u plodovima (borove šišarke). Prisustvo galerija sa izmetom i svilenkastim vlaknima
				Pissodes validirostris		*Pinus*	Okrugle i čiste rupe od moljaca u borovim šišarkama. Jajašca – položena su pokrivena sa tamnim zapušačima i položena u borovim šišarkama
		Insekti koji sišu	250	*Haematoloma dorsatum*		*Pinus, Juniperus*	Jajašca – leže u obliku „zapljuvka" na travi. Crvene iglice
				Leucaspis pini		*Pinus*	Odrasli sa eliptičnim bijelim tijelima (poput bijelih mjesta zalijepljenih na iglice)
				Matsucoccus sp.		*Pinus*	Lomljenje i formiranje kora na deblima. Odrasli sa elipsastim [illegible] tijelima ispod kore.
		Insekti koji kopaju	260	*Epinotia subsequana*		*Abies*	Braon i uvijene iglice na dijelu dužine, sa rupom od sipca
		Uzročnici gala	270				
		Ostali insekti	290				

Vrste insekata na četinarima i oštećenja koja prouzrokuju/ Types of insects on conifers and damages they cause

Tabela 20/Table 20.

Grupa agenasa	Šifra	Klasa	Šifra	Glavne vrste	Šifra	Pogođeni genus	Simptomi
				Tabela - Šifre za grupu agenasa 200 (insekti): <u>lišćari</u>			
				LIŠĆARI			
INSEKTI	200	Uzroci defolijacije (uključujući uzročnike skeletiranja lišća, itd.)	210	*Abraxas pantaria*		*Fraxinus*	Napada lišće [illegible]
				Agelastica alni		*Alnus*	Lišće se pretvara u skelet [illegible]
				Altica quercetorum		*Quercus*	Lišće izgleda braon zbog skeleta
				Pyrrhalta luteola		*Betula*	Lišće pojedeno
				Galerucella lineola		*Populus, Salix*	Lišće [illegible]
				Gonipterus scutellatus		*Eucalyptus*	Lišće pojedeno, [illegible]
				Leucoma salicis		*Populus, Salix, Betula*	Polaganje bijelih jajašaca na deblima i granama
				Lymantria dispar		*Quercus*	Napada ovogodišnje listove, [illegible]. Polaganje jajašaca izgleda kao žuta masa
				Archips xylosteana		*Quercus*	Napada vrhove ovogodišnjih izbojaka. [illegible]
				Erannis defoliaria		*Quercus, Fagus, Betula e.a.*	
				Melolontha spec.		*Quercus e.a.*	
				Operophtera brumata		*Quercus*	
				Operophtera fagata		*Fagus*	
				Thaumetopoea processionea		*Quercus*	
				Melasoma populi = Chrysomela populi		*Populus, Salix*	[illegible]
				Tortrix viridana		*Quercus*	Napada vrhove ovogodišnjih izbojaka. [illegible]
				Xanthogaleruca luteola		*Ulmus*	Lišće izgleda braon zbog skeleta
		Bušači debla, grana i grančica (uključujući insekte koji kopaju po pupoljcima)	220	*Agrilus grandiceps*		*Quercus*	[illegible]
				Cerambyx sp.		*Quercus*	Velike eliptične rupe u osnovi debla i debele grane kroz koje ide piljevina. Velike galerije.
				Coraebus florentinus		*Quercus*	Umiranje malih i srednjih grana. [illegible]
				Agrilus biguttatus		*Quercus*	
				Agrilus viridis		*Fagus*	
				Crematogaster scutellaris		*Quercus*	Veliki broj malih rupa, [illegible]
				Cryptorhynchus lapathi		*Populus, Salix*	Kružne rupe [illegible]
				Melanophila picta		*Populus*	Nestajanje kore i eliptične rupe [illegible] u osnovi debla.
				Paranthrene tabaniformis		*Populus, Salix*	Kružne rupe [illegible]
				Phoracantha semipunctata		*Eucalyptus*	[illegible]
				Platypus cylindrus		*Quercus*	Kružne rupe [illegible] piljevina, koja se skuplja u osnovi debla
				Sesia apiformis		*Populus, Salix*	Kružne rupe na osnovi debla i [illegible] od piljevine. [illegible] 10-15 centimetara [illegible]
		Insekti koji buše pupoljke	230				
		Insekti koji buše plodove	240	*Curculio glandium*		*Quercus*	[illegible]
		Insekti koji sisaju	250	*Glycaspis brimblecombei*		*Eucalyptus*	[illegible]
				Kermes sp.		*Quercus*	[illegible]
		Insekti koji kopaju	260	*Rhynchaenus fagi*		*Fagus*	Mnogo malih rupa na lišću, [illegible]
		Uzročnici gala	270	*Cynips folii*		*Quercus*	Velika [illegible] gala [illegible]
				Dryomyia lichtensteini		*Quercus*	[illegible]
				Mikiola fagi		*Fagus*	Male [illegible] gale [illegible] na lišću.
		Ostali insekti	290				

Vrste insekata na lišćarima i oštećenja koja prouzrokuju/ Types of insects on broadleaves and damages they cause

Prilikom posmatranja na BIT tačkama u Crnoj Goru u 2010 zapažena su sledeća oštećenja od insekata.

Na lišćarskim vrstama oštećenja su najviše izražena na najzastupljenijim vrstama bukvi i hrastovima. Dok se kod četinara oštećenja javljaju najviše na jeli, ali i na smrči i borovima.

Lymantria dispar - Gubar – najopasnija štetočina šumskog drveća kod nas (slika 18,19).

Prilikom ovog posmatranja zabilježena je u pojedinačnim slučajevima na BIT tačkama 25 i 8. Pripada gradogenim insektima, odnosno povremeno se javlja u gradacijama sa visokim i vrlo visokim populacionim nivoom. Kao polifaga, gubar se hrani lišćem preko 200 vrsta biljaka (oštećuje i četinare), u gradacijama vrlo velika oštećenja nanosi šumskom drveću, ali i voćnjacima pa i drugim poljoprivrednim kulturama. Najčešće napada hrast, bukvu, grab, crnu topolu, jablan i druge lišćare.

During the observation on bio indication plots in Montenegro in 2010 the following insect damages were noticed.

On broadleave species the damages were most prominent on the most present species of beech and oak., while damages on conifers were mainly seen on fir, but also on spruce and pine trees.

Lymantria dispar – Gypsy moths – the most dangerous pest of forest trees here (Figure 18,19).

During this observation it was noticed in individual cases on bio indication plots 25 and 8. It belongs to the outbreaking insects, that is, ocassionally appears in gradations with high and very high population level. As polyphagous, gypsy moth is fed by leaves of more than 200 plant species (damages conifers as well), in gradations causes huge damages to forest trees and also fruit orchards and other agricultural cultures. Subjects of his attacks are most frequently oak, beech, hornbeam, black poplar, poplar and other broadleaves.

Slika 18/Figure 18.

Slika 19/Figure 19.

Lymantria dispar – polaganje jajašaca na koru drveća/– laying eggs on bark of the tree

Takođe na bukvi je zabilježen na BIT 11,13, 21 na 52 stabla prisustvo i štete nastale od *Rhynchaenus fagi (slika 20, 21)*koji izaziva oštećenja lista u vidu većeg broja manjih rupa na listu.

It was also recorded on beech, in bio indication plot 11,13, 21 ,on 52 trees its presence and damages caused by *Rhynchaenus fagi (Figure 20,21)* causing leaves damages in the form of a larger *number of smaller holes on the leaf.*

Slika 20/Figure 20.

Slika 21/Figure 21.

Rhynchaenus fagi – oštećenja na listu/– damages on the leaf

Mikiola fagi – mušica galica na lišću bukve (slika 22). Oštećenja nastala od bukvine mušice galice zapažene su na BIT tačkama 4, 17 i 34.

Mikiola fagi – on beech leaf (Figure 22). Damages incurred from beech mikiola fagi were noticed on bio indication plots 4, 17 and 34.

Slika 22/Figure 22.

Mikiola fagi – galice na lišću bukve/ Mikiola fagi – on beech leaves

Pored ovih oštećenja na bukvi su zabeleženi i pojedinačni slučajevi *Cryptococcus fagisuga* na kori drveta kao i *Operophtera brumata* koja je polifaga i javlja se na većem broju vrsta.

In addition to these damages on the beech, we have also noticed individual cases of *Cryptococcus fagisuga* on tree bark as well as *Operophtera brumata* which is polyphage and appears in a larger number of species.

Kao štetočina hrasta najčešće je primećen *Altica quercetorum* (slika 23) u 9 slučajeva na BIT 11 i 18.

Altica quercetorum (Figure 23) was noticed as the most frequent oak pest , in 9 cases on bio indication plots 11 and 18.

Slika 23/Figure 23.

Altica quercetorum na lišću hrasta/ Altica quercetorum on oak leaves

Kod četinara su zapaženi samo pojedinačni slučajevi oštećenja od insekata i to na jeli i smrči su konstantovane štete koju su načinili insekti roda *Scolitidae* (*polygraphus polygraphus, ips typographus* – potkornjaci). Sa obzirom da ni jedna od ovih vrsta nije u gradaciji štete nastale od njih su neznatne.
Ako bi izuzeli potkornjake na pojedinim tačkama primjećeno je prisustvo *Camponotus herculeanus* na četinarima bez oštećenja stabala, ali je poznato da se ovaj insekt javlja zajedno sa gljivom *Heterobasidion annosum* i oštećuje srčiku dok beljika ostaje neoštećena i to posebno u donjem dijelu stabla.
Kod Crnog bora zabeleženi su pojedini slučajevi *Diprion pini* i *Ips sexdentus* sa neznatnim oštećenjima.

At conifers, we have perceived only individual cases of damages caused by insects. At fir and beech we have registered damages caused by insects of genus *Scolitidae* (*polygraphus polygraphus, ips typographus* – bark beetles). Since none of these species is in gradation, damages caused by them are insignificant.
With the exception of bark beetles in some plots, we have also perceived presence of *Camponotus herculeanus* on conifers without tree damages, but it is known that this insect appears together with fungi *Heterobasidion annosum* damaging the heartwood, while sapwood remains undamaged, especially in lower part of the tree.
At black pine, we have registered individual cases of *Diprion pini* and *Ips sexdentus* with ordinary damages.

9.1.2. Oštećenja od gljiva

Biljne bolesti predstavljaju najčešće uzročnike bioloških oštećenja na šumskim vrstama. U toku posmatranja na BIT u Crnoj Gori u toku 2010 godine primjećena su oštećenja od biljnih bolesti na 49 stabala. Kada govorimo o biljnim patogenima koji se javljaju na šumskom drveću prema ICPF metodologiji razvrstani su u sledeće grupe prema tabelama 21 i 22:

9.1.2. Damages caused by fungi

Plant diseases represent the most frequent causes of biological damages on forest species. During the observation of bio indication plots in Montenegro in 2010 we have perceived damages caused by plant diseases on 49 trees. When speaking about plant pthogens appearing on forest trees, according to the ICPF methodology they are classified into following groups, according to Tables 21 and 22:

Tabela 21/Table 21.

				ČETINARI			
Agens	Šifra	Klasa	Šifra	Glavne vrste	Šifra	Pogođeni genus	Simptomi
Gljive	300	Gljive na iglicama	301	Lophodermium pini = Lophodermium seditiosum		Pinus	Duge sjajno crne karpofore koje se nalaze na gornjoj površini iglice
				Cyclaneusma minus = Naemacyclus minor		Pinus (Sylvestris, radiata)	Formiranje poprečnih crvenkastih braon pruga (savijanje) i prisustvo [illegible] karpofora [illegible]
				Phaeocryptopus gaeumannii		Pseudotsuga	
				Rhabdocline pseudotsugae		Pseudotsuga	
				Mycosphaerella laricina		Larix	
				Naemacyclus niveus		Pinus	Svetle karpofore. Kada spadnu, ostaju rupice u iglicama
				Thyriopsis halepensis		Pinus	Na iglicama crne kružne karpofore sa braon centrom
				Mycosphaerella pini = Dothistroma septospora		Pinus (radiata, nigra, halepensis)	Pojava takozvanih „crvenih traka" na iglicama
				Chrysomyxa abietis		Picea	Žute do narandžasto braon pjege na iglicama koje opadaju prerano
		Rđavi djelovi na deblu i izbojcima	302	Melampsora pinitorqua		Pinus	Savijanje iglica u oblik C ili S. Da bi završila ciklus neophodan je prelazni domaćin iz roda topola i borova
				Cronartium ribicola		Pinus strobus	
				Coleosporium tussilaginis = Coleosporium senecionis		Pinus	"prstenasta rđa" četina. Kada su pune imaju narandžastu boju a bele su kada se isprazne
				Cronartium flaccidum = Peridermium pini		Pinus	"mjehurasta rđa" kore. Pojava na granama i deblu sa obilnim [illegible] smole. Plikovi su narandžasti kada su puni i [illegible] kada su prazni
		Gljive prouzrokovači truleži	303	Gremmeniella abietina		Pinus	Smrt grana i pupoljaka sa crnim karpoforima preko kore. Kad je zaražena [illegible]
				Cenangium ferruginosum		Pinus	Smrt grana i pupoljaka, pojava crne karpofore na kori
		Gljive razarači drveta	305	Sphaeropsis sapinea = Diplodia pinea		Pinus	Izbojci su zakrivljeni, jake deformacije, pojava tokova smole i crnih karpofora
				Sirococcus conigenus		Pinus (halepensis)	Smrt izdanaka i crvenkasto braon iglice koje vise
		Gljive prouzrokovači truleži pridanka i korena	304	Fomes pini = Trametes pini		Pinus	Ravna drvenasta karpofora oblika „konjsko kopito" [illegible] braon boje
				Armillaria mellea		many tree species	Bijela lepezasta [illegible] vidljiva posle uklanjanja kore sa korenovog vrata, razvija se i napreduje na gore od korena, javljaju se pečurke boje meda u [illegible] grupama
				Heterobasidion annosum		Abies, Pinus, Picea, Larix, Pseudotsuga	Bijela [illegible] posle uklanjanja kore korijena ili korjenovog vrata. Pečurke su tamno braon boje sa bijelim [illegible] na površini korjenovog vrata.
		Ostale gljive	390				

Vrste fitopatogenih organizama na četinarima i oštećenja koja prouzrokuju/ Types of phytopathogen organisms on conifers and damages they cause

Tabela 22/Table 22.

Agens	Šifra	Klasa	Šifra	Gljivna vrsta	Šifra	Pogođeni genus	Simptomi
				LIŠĆARI			
Gljive	300	Gljive prouzrokovači mrljavosti na lišću	305	Drepanopeziza punctiformis - Marssonina brunnea		Populus, Salix	Male okrugle površine sa smeđim marginama i sivkasto bijelim centrom
				Rhytisma spp.		Salix, Acer	Velike crne nekrotične mrlje u obliku krasta površine
				Taphrina aurea		Populus	Žućkaste izrasline ili ispupčenja na listu
				Mycosphaerella maculiformis		Castanea	Kestenova rđa. Crvenkasto braon tačkice raspoređene duž lista
				Septoria populi		Populus	Siva mjesta ograničena marginama crvenkastog boje
				Harknessia eucalypti		Eucalyptus	Crvenkasto braon mrlje nepravilnog oblika
				Mycosphaerella eucalypti		Eucalyptus	Crvene tačke
		Antraknoze	306	Apiognomonia spp.		Quercus, Juglans	Zahvata lišće
		Pepelnice	307	Uncinula spp.		Populus, Salix, Ulmus	Sivkasto bijeli prah preko pupoljaka i lišća
				Microsphaera alphitoides		Quercus	Bijelkasti prah preko lišća
		Gljive prouzrokovači uvenuća	308	Ophiostoma novo - ulmi		Ulmus	Uvenuće i propadanje vrha. Prilikom presijecanja grančica vidi se braon nekrotični prsten koji [illegible]
				Ceratocystis fagacearum		Quercus	
				Venturia populina = Pollaccia elegans		Populus	Listovi su braon boje i krive se prema stablijci
		Rđe	302	Melampsora allii - populina		Populus	Žute do narandžaste tačke sa donje strane lista
				Melampsoridium betulinum		Betula	Brzo množenje malih flekica na listovima koje zbog toga opadaju prerano
		Gljive raka drveta	303	Botryosphaeria stevensii - Diplodia mutila		Quercus	[illegible] karpofore
				Hypoxylon mediterraneum		Quercus	Kora se odvaja u pločama, na deblu i na granama
				[illegible]		Quercus	
				Dothichiza populea		Populus	Crna karpofora na pupoljcima i kod grančica
		Gljive prouzrokovači truleži	309	Cryphonectria parasitica = Endothiella parasitica		Castanea	Žućkasti [illegible] pukotinama kore
				[illegible]		Quercus	
				Stereum rugosum		Quercus, Fagus	
				Cytospora chrysosperma = Valsa sordida		Populus	Narandžaste karpofore po kori
				Nectria spp.		Quercus	Crvene karpofore u pukotinama kore
		Gljive prouzrokovači truleži pridanka i korena	304	Fomes fomentarius		Fagus	Ravna drvenasta karpofora oblika „konjskog kopita". Gornji deo je koncentrično rava površina sivkasto braon boje
				Ganoderma applanatum		Fagus	Ravna drvenasta karpofora oblika „konjska kopita". Gornji deo je pokriven prahom crvenkasto braon boje
				[illegible]		Fagus	Ravna drvenasta karpofora oblika „konjskog kopita". Gornji deo je crvenkasto braon sa žutim marginama dok je donji deo žućkaste boje
				Armillaria mellea		many tree species	
				Phytophthora spec.		Alnus, Castanea, Quercus, Betula, Fagus	Crna mjesta sa nazubljenim marginama ispod kore i crnkastom tokovima
		[illegible]	310	[illegible]		Quercus	[illegible]
		Ostale gljive	390				

Vrste fitopatogenih organizama na lišćarima i oštećenja koja prouzrokuju / Types of phytopathogen organisms on broadleaves and damages they cause

Prozrokovači biljnih bolesti kao primarni uzročnici su primijećeni tokom posmatranja 2010 godine na BIT u Crnoj Gori primijećeni su na 49 stabala, ali takođe treba uzeti u obzir da se na pojedinim stablima u odmaklom stadijumu razvoja oštećenja moglo primjetiti oštećenje od biljnog patogena, gde se nije mogao indentifikovati primarni uzročnik te su ta stabla svrstana u neindetifikovane uzročnike, ali pretpostavka je da će se plodonosna tijela razviti i da će uzročnik biti moguće indentifikovati u sledećem posmatranju. Oštećenja po najznačajnijim vrstama drveća koja se javljaju u Crnoj Gori.

Causes of plant diseases that have been perceived during the observation in 2010 on bio indication plots in Montenegro were found on 49 trees, but we also have to take into account that in individual trees we could see the damage caused by plant pathogen, where the cause could not be identified and the trees were classified under unidentified causes. But the assumption is the fruit bearing bodies shall develop and the cause will be possible to identify in the next observation. Daages per most significant tree species appearing in Montenegro.

Jela

Na BIT tačkama gde je registrovana jela zapaženo je prisustvo "veštičinih metli" koje uzrokuje *Mellampsorella caryophyllacearum (slika 24)*. Na četinama jele, takođe je prisutna gljiva *Cenangium abietis* u manjem obimu. *Armillariella mellea* je takođe prisutna u slabijem obimu. Takođe je primjetna i *Chrysommyxa abietes* i *Fomitopsis pinicola*, dok je kod mlađih stabala jele posebno onih koja su rasla u zasjeni bilo moguće konstantovati *Cytospora friesii* (slika 25) koja izaziva nekrozu i osipanje četina i nekrozu kore mladih izbojaka. Takođe na jeli je primećena i *Lirula nervisequia (slika 26 i 27).*

Fir

On bio indication plots where fir has been registered, we noticed the presence of "witch's brooms" caused by *Mellampsorella caryophyllacearum(Figure 24)*. On needles of fir we also have the presence of fungi *Cenangium abietis* in smaller volume. *Armillariella mellea* is also present in smaller volume. Also noticeable is *Chrysommyxa abietes* and *Fomitopsis pinicola*, while at younger fir trees, especially those growing unde rshade , it was possible to identify the *Cytospora friesii* (Figure 25)causing necrosis and needle blight and necrosis of yound sprout bark. On fir, we also noticed *Lirula nervisequi (Figure 26 and 27).*

Slika 24/Figure 24.

Mellampsorella caryophyllacearum – veštičine metle na jeli/–witch's brooms on fir tree.

Slika 25/Figure 25.

Cytospora friesii – nekroza kore mladih izbojaka i osipanje četina jele/– necrosis of yound sprout bark and needle blight of fir

Slika 26/Figure 26.

Slika 27/Figure 27.

Lirula nervisequia na jeli/ Lirula nervisequia on fir tree

Smrča

U sastojini smrče prisutan je *Heterobasidion annosum* (slika 28) kao i *Lophodermium picea kao i herpotrichia nigra*.

Spruce

The spruce stand also have *Heterobasidion annosum* (Figure 28) as well as *Lophodermium picea and herpotrichia nigra*.

Slika 28/Figure 28.

Heterobasidion annosum u pridanku stabla / Heterobasidion annosum in root swelling

Crni Bor

Dothistroma pini javlja se na prošlogodišnjim četinama crnog bora, u 2010. godini u slabijem obimu. U pridanku stabala bora, javlja se gljiva prouzrokovač truleži (*Fomitipsis pinicola(slika 29 i 30))*. *Cenangium ferruginosum* se javlja kod crnog bora i uzrokuje sušenje grana u donjim djelovima krune.

Black pine

Dothistroma pini appears on last year's needles of black pine, in 2010 in weaker volume. In root swelling of pine we have the appearance of fungi that causes rot (*Fomitipsis pinicola(Figure 29 and 30))*. *Cenangium ferruginosum* appears at black pine and causes drying of branches in lower parts of the crown.

Slika 29 /Figure 29

Slika 30 /Figure 30

Fomitopsis pinicola na crnom boru i izgled karpofore/ *Fomitopsis pinicola* on black pine, and appearance of karpofora

Bukva

Tokom ispitivanja na bioindikacijskim tačkama u 2010. godini, kao i u okolini tačaka sa bukvom mogle su se zapaziti pojedini patogeni organizmi. Utvrđeni su pojedinačni slučajevi parazitnih i saprofitnih gljiva koje se javljaju na stablima bukve. Karakteristične gljive koje su primećene na bukvi su *Nectria coccinea* i *Nectria cinnobarina (slika 31)*, dok su takođe u blizini BIT tačaka sa bukvom primjećene i *Trametes versicolor (slika 32) i Fomes fomentarius (slika 33)* .

Beech

During the research on bio indication plots in 2010, as well as in the surroundings of beech plots we could notice certain pathogen organisms. We have identified individual cases of parasite and saprophyte fungi appearing on beech trees. Characteristic fungi that have been noticed on beech have been *Nectria coccinea* and *Nectria cinnobarina (Figure 31)*, while we have also noticed *Trametes versicolor (Figure 32) and Fomes fomentarius (Figure 33)in the vicinity of nio indication plots with beech* .

Slika 31/Figure 31.

Nectria cinnobarina

Slika 32/Figure 32.

Trametes versicolor

Slika 33/Figure 33.

Fomes fomentarius

Hrastovi

Registrovano je prisustvo pojedinih tumora i truleži na granama cera, u slabom obimu. Na stablima cera i kitnjaka postoji i ospičavost lišća koju prouzrokuje *Mycosphaerella maculiformis i* prisutna je u malom obimu. Na podmladku kitnjaka primjećeno je prisustvo pepelnice lišća koju prouzrokuje *Microsphaera alphitoides (slika 34)*.

Oaks

We have registered presence of individual tumours and rot on bitter oak branches, of poor volume. On bitter oak and sessile flowered oak there has been the spottiness of leaves caused by *Mycosphaerella maculiformis, present in low volume*. On sessile flowered oak progeny we have noticed the presence of powdery mildew of leaves caused by *Microsphaera alphitoides (Figure 34)*.

Slika 34/Figure 34

Microsphaera alphitoides

9.2. Oštećenja abiotičkog porijekla

Kada govorimo o abiotičkim faktorima koji se javljaju na šumskom drveću prema ICPF metodologiji razvrstani su u sledeće grupe.

9.2. Damages of abiotic origin

When speaking about abiotic factors appearing on forest trees, according to the ICPF methodology they have been classified into the following groups.

Tabela 23 /Table 23.

				ČETINARI/LIŠĆARI				
Agens	Šifra	Klasa	Šifra	Tip oštećenja	Šifra	Specifični faktor	Kod	Simptomi
ABIOTIČKI FAKTORI	400	Hemijski faktori	410	Nutritivni poremećaji nedostatka hranjivih materija	411	Cu - nedostatak	41101	
						Fe - nedostatak	41102	
						Mg - nedostatak	41103	
						Mn - nedostatak	41104	
						K - nedostatak	41105	
						N - nedostatak	41106	
						B- nedostatak	41107	
						Mn - toksičnost	41108	
						Ostalo	41109	
				Morska so + površinska so	412			
		Fizički faktori	420	Lavina	421			
				Suša	422			
				Poplave /Visoka voda	423			
				Mraz	424	Zimsko smrzavanje	42401	
						Kasni mrazevi	42402	
				grad	425			
				Temperatura /opekotine od sunca	426			
				Okretljenje	427			
				Klizišta	429			
				Snieg /Led	430			
				Vetar	431			
				Oštećenja od mraza	432			
				Pitko / slanačno zemljište	433			
		Ostali abiotski faktori	490					

Vrste abiotičkih faktora i oštećenja koja prouzrokuju/ Types of abiotic factors and damages they cause

Od abiotičkih činilaca registrovana su oštećenja od klimatskih ekstrema (mrazopucine, vetrolomi i vetroizvale, snegolomi i snegoizvale i upale kore na 39 stabala. Pojave oštećenja od abiotičkih činilaca su značajna jer predstavljaju potencijalna žarišta za razvoj bioloških štetnih organizama i njihovu gradaciju.

As far as abiotic factors are concerned, we have registered damages from climate extremes (frost cracks, wind breaks and windthrows, snow breaks and snowthrows and bark blisters) on 39 trees. The phenomena of damages caused by abiotic factors are significant because they represent the potential focal point for development of biologically harmful organisms and their gradation.

9.3. Oštećenja nastala djelovanjem čovjeka

Oštećenja od čovjeka primjećena su na 53 stabla. Kada govorimo o faktorima koji su uzrokovani djelovanjem čovjeka, a koji se javljaju na šumskom drveću prema ICPF metodologiji razvrstani su u sledeće grupe prema tabeli 24:

9.3. Damages caused by human actions

Damages caused by human actions have been noticed on 53 trees. When speaking about factors caused by human actions, appearing on forest trees, according to the ICPF methodology they have been classified into the following groups, as per the Table 24:

Tabela 24/Table 24.

ČETINARI/ LIŠĆARI

Agent group	Code	Class	Code	Type	Code	Symptoms
[illegible]	500	[illegible]	510			
		[illegible]	520			
		[illegible] konverziju	530			
		[illegible]	540	[illegible]	541	
				[illegible]	542	
				[illegible]	543	
				Skidanje plute	544	
				[illegible]	545	
		[illegible]	550			
		Izgradnja [illegible]	560			
		[illegible]	570			
		[illegible]	580	Pesticid	546	
				Mineralne soli	547	
		Ostale [illegible] akcije čovjeka	590			

Štete od djelovanja čovjeka/ Damages caused by human action

Najveće štete šumi može da prouzrokuje čovjek direktnim ili indirektnim djelovanjem. Štete uzrokuju i uposleni u šumarstvu i srodnim djelatnostima kao i druga neuposlena lica. Štete od uposlenih lica javljaju se u različitim vidovima: pogrešno i nestručno gazdovanje šumama, nepoštovanje odredbi i planova gazdovanja, neracionalno korišćenje šuma, pogrešni izbori za izgradnju šumskih komunikacija, izgradnja vlaka kroz mlade sastojine, kretanje vozila sa prekomjernim teretom i, oštećenja podmlatka i stabala prilikom sječe i izvlačenja idr.

The largest forest damages may be caused by humans by their direct or indirect actions. Damages are caused by forestry and similar activities employees , as well as other unemployed persons. Damages caused by employees appear in different forms: wrong and unskilled forest management, not abiding to the provisions and management plans, irrational forest utilization, wrong choices for building forest roads, building of skidding roads through young stands, movement of vehicles under excess load, and damages on progeny and trees while harvesting or skidding.

Štete od neuposlenih lica odnose se na bespravne sječe, nepravilnu upotrebu hemijskih sredstava, oštećivanje podmladka i stabala, neplanske siječe, ne uspostavljanje šumskog reda, izazivanje požara i krčenje šume kao i druge štete.

Damages caused by unemployed persons refer to illegal logging, irregular usage of chemical assets, damaging progeny and trees, unplanned harvesting, failure in establishing forest order, causing fire and clearing of forests , as well as other damages.

9.4. Oštećenja nastala šumskim požarima

Požari predstavljaju veliku štetočinu i od zdravih i vrijednih šuma za vrlo kratko vreme stvaraju zgarišta i ugrožene površine i posebno su opasni jer mogu da se razviju na velikoj površini.
Požari se obično javljaju djelatnošću čovjeka (namjerno ili nenamjerno), dok prirodno nastaje udarom groma. Oštećenja od šumskih požara primjećena su na 16 stabala. Oštećenja od šumskih požara zabilježena su na bukvi i na crnom jasenu, što je neobično jer su najčešće ugroženi četinari i to posebno crni i bijeli bor i smrča, ali sa obzirom da je 2010 bila godina sa puno padavina te je mnogo manji broj požara registrovan na teritoriji Crne Gore nego prethodnih godina.

9.4. Damages caused by forest fire

Fire presents a huge pest and from healthy and valuable forests may, for a very short time, create fire burnt area or endangered areas, and is especially dangerous because it can spread on a huge area.
Fire often appears after human actions (intentionally or not intentionally), while naturally it appears after the thunder struck. Forest fire damages have been noticed on 16 trees. Forest fire damages were noticed on beech and black ash, which is unusual because most frequentlt the conifers are the ones that are threatened, especially black and white pine and spruce, but having in mind the 2010 was a year with lot of precipitations we have had a much lower number of fires registered in the teritorry of Montenegro than in previous years.

10. Anexi
10. Annexes

Aneks 1/Anex1

Monitoring zdravstvenog stanja šuma u Crnoj Gori/ Monitoring of health condition of forests in Montenegro

Montenegro

The Ministry of Agriculture, Forestry and Water Management

Johann Heinrich von Thünen-Institute (vTI)
Federal Research Institute for Rural Areas, Forestry and Fisheries
Institute for World Forestry
Leuschnerstrasse 91
D- 21031 Hamburg, Germany

Prof. Dr. Michael Köhl

PREDMET : MONITORING ZDRAVSTVENOG STANJA ŠUMA U CRNOJ GORI

Poštovani prof. Köhl,

Kako prvo, želio bih da Vas pozdravim i obavijestim da će od ove godine Crna Gora redovno pratiti zdravstveno stanje šuma u skladu sa metodologijom monitoringa Međunarodnog programa saradnje (ICP). Ovu aktivnost smatramo veoma značajnom sa razloga što smo Program monitoringa praćenja zdravstvenog stanja u našim strateškim dokumentima definisali kao jednu od prioritetnih aktivnosti.

Pripremne aktivnosti za impementaciju ove aktivnosti su uveliko u toku, tako da Vam ovom prilikom prosljeđujemo i naš zvaničan zahtjev za dodjelu identifikacionog koda, kako biste nas uvrstili u postojeći informacioni sistem.

Saradnja sa Vašom institucijom, kao ključnom za implementaciju Međunarodnog programa saradnje (ICP) za nas je veoma značajna jer će pomoći Crnoj Gori da implementira brojne međunarodne obaveze.

Stoga bih Vas zamolio da dalje kontakte po ovim pitanjima ostvarite sa mojim pomoćnikom za sektor šumarstva dr Milosavom Anđelićem (milosav.andjelic@gov.me , phone: +382 20 482 275) koji će biti ujedno i nacionalni kordinator za izvještavanje po pitanju monitoringa.

Srdačno Vas pozdravljam,

Ministar

Mr. Milutin Simović

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Montenegro

The Ministry of Agriculture, Forestry and Water Management

Johann Heinrich von Thünen-Institute (vTI)
Federal Research Institute for Rural Areas, Forestry and Fisheries
Institute for World Forestry
Leuschnerstrasse 91
D- 21031 Hamburg, Germany

Prof. Dr. Michael Köhl

SUBJECT: MONITORING OF HEALTH STATUS OF FORESTS IN MONTENEGRO

Dear prof. Köhl,

First of all, I would like to greet you and inform you that starting from this year Montenegro will regularly monitor the health status of forests, in accordance with the monitoring methodology of International Cooperation Program (ICP). We deem this activity very important because within our strategic documents we have defined the Monitoring Program of monitoring the health status of forests as one of the priority activities.

Preparatory activities for implementation of this activity are already ongoing, so that I am using this opportunity to send you our official request for allocating the identification code, in order to include us into the existing informational system.

Cooperation with your institution, crucial for implementation of International Cooperation Program (ICP) is very important for us because it will help Montenegro to implement its numerous international commitments.

Therefore I would ask you to get into further contacts regarding these issues with my Deputy for Forestry Sector, dr Milosav Anđelić (milosav.andjelic@gov.me ; phone: +382 20 482 275) who will, at the same time, be a National Coordinator for Reporting on issues of monitoring.

Yours sincerely,

MINISTAR

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Crna Gora
MINISTARSTVO POLJOPRIVREDE, ŠUMARSTVA I VODOPRIVREDE
PODGORICA

Primljeno:	03.09.10		
Org. jed.	Broj	Prilog	Vrijednost
322/10	-0801-		

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Mr. Milutin Simović
Minister of Agriculture, Forestry and Water Management
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81000 Podgorica
MONTENEGRO

Our ref. / our message dd. Your ref. / your message dd.

Date
24/8/2010

Ref: your participation in ICP Forests

Dear Mr. Simović,

I would like to confirm receipt of your letter of this summer in which you express the interest of Montenegro in forest health monitoring and, in particular, its participation in the ICP Forests programme.
Herewith I welcome you as the 42nd country participating in the programme and I am looking forward to a fruitful cooperation.

I have forwarded your letter to Dr. Martin Lorenz, Head of the Programme Coordinating Centre of ICP Forests. The Programme Coordinating Centre (PCC) is hosted at my institute. The colleagues will provide you with all necessary technical information.

In addition we will inform the UNECE Secretariat in Geneva about your participation in the programme.

I would like to apologize for the delayed response to your letter which is mainly due to summer holidays, and remain with kind regards,

Prof. Dr. Michael Köhl
Chairman of ICP Forests

Aneks 2 / Anex 2

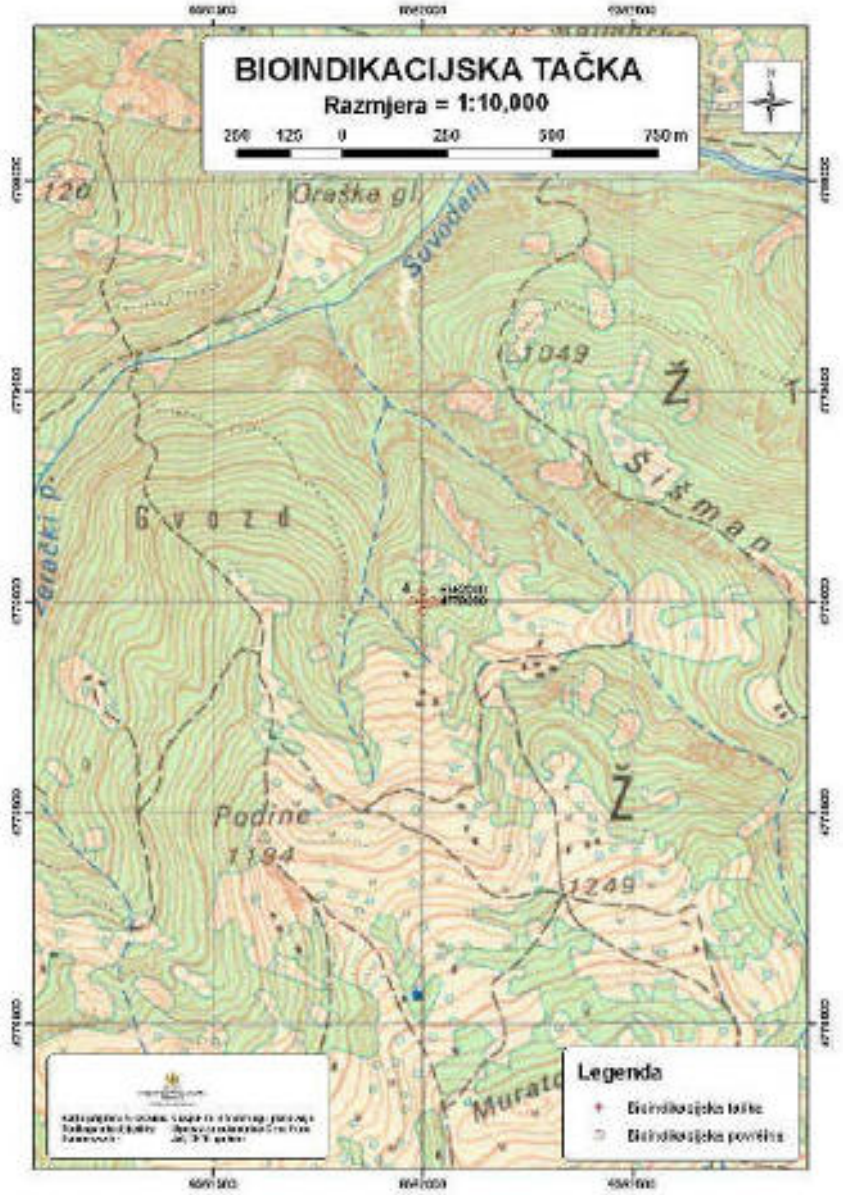
Grafički prikaz Bioindikacijskih tačaka u Crnoj Gori/ Graphical overview of bioindication plots in Montenegro

Tačka 1/Point 1.

Tačka 2/Point 2.

Tačka 3//Point 3.

Tačka 4//Point 4.



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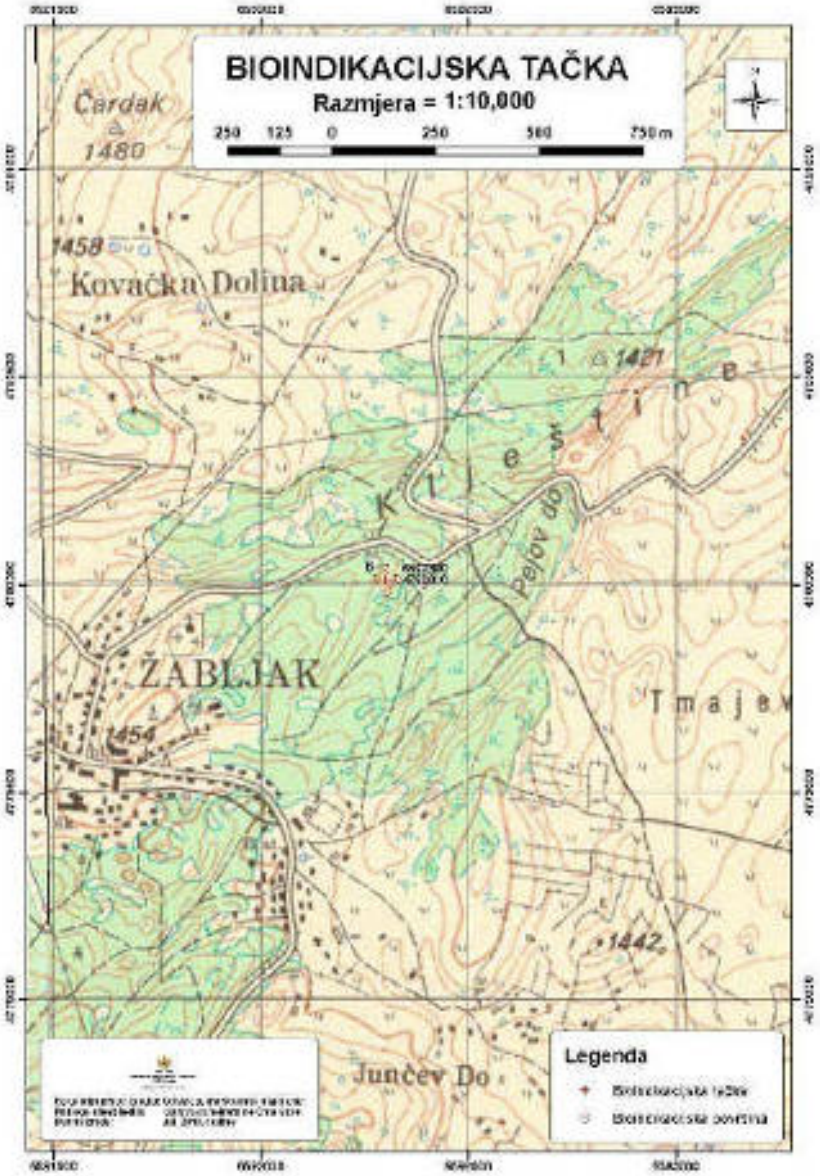
Tačka 6/Point 6.



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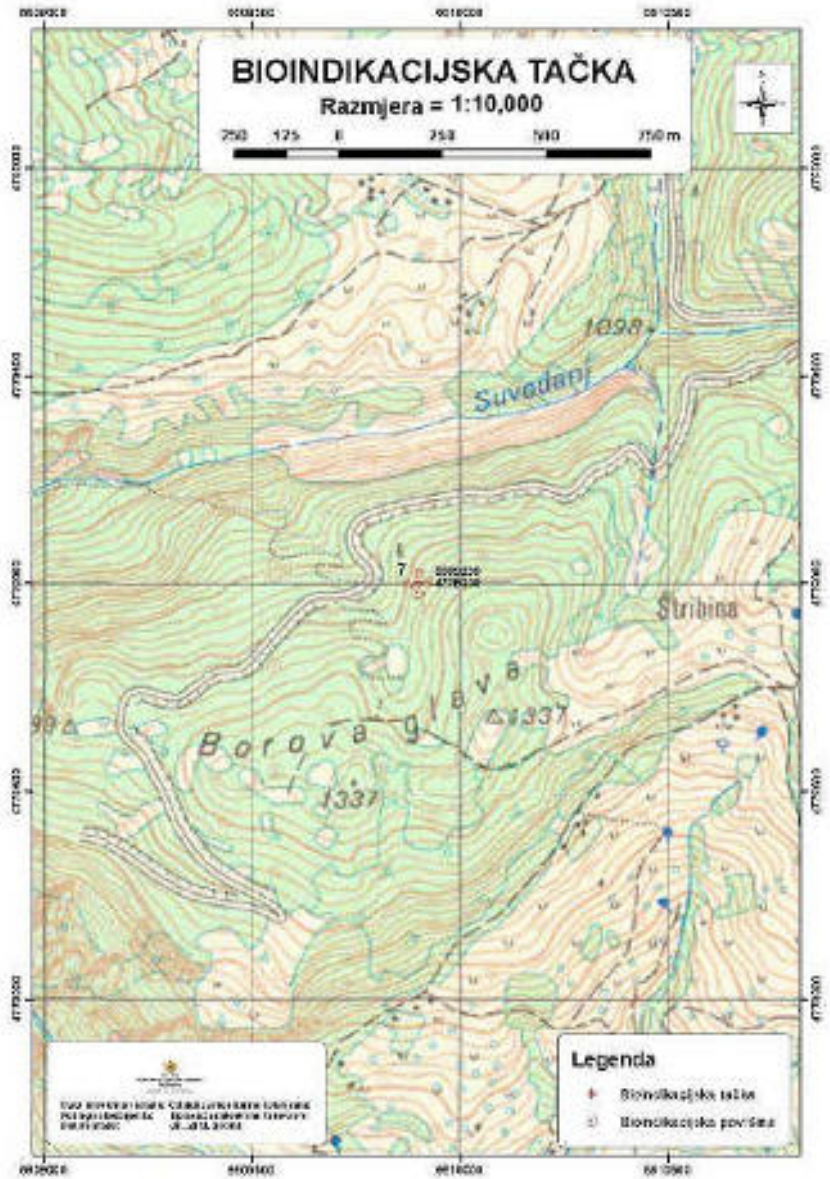

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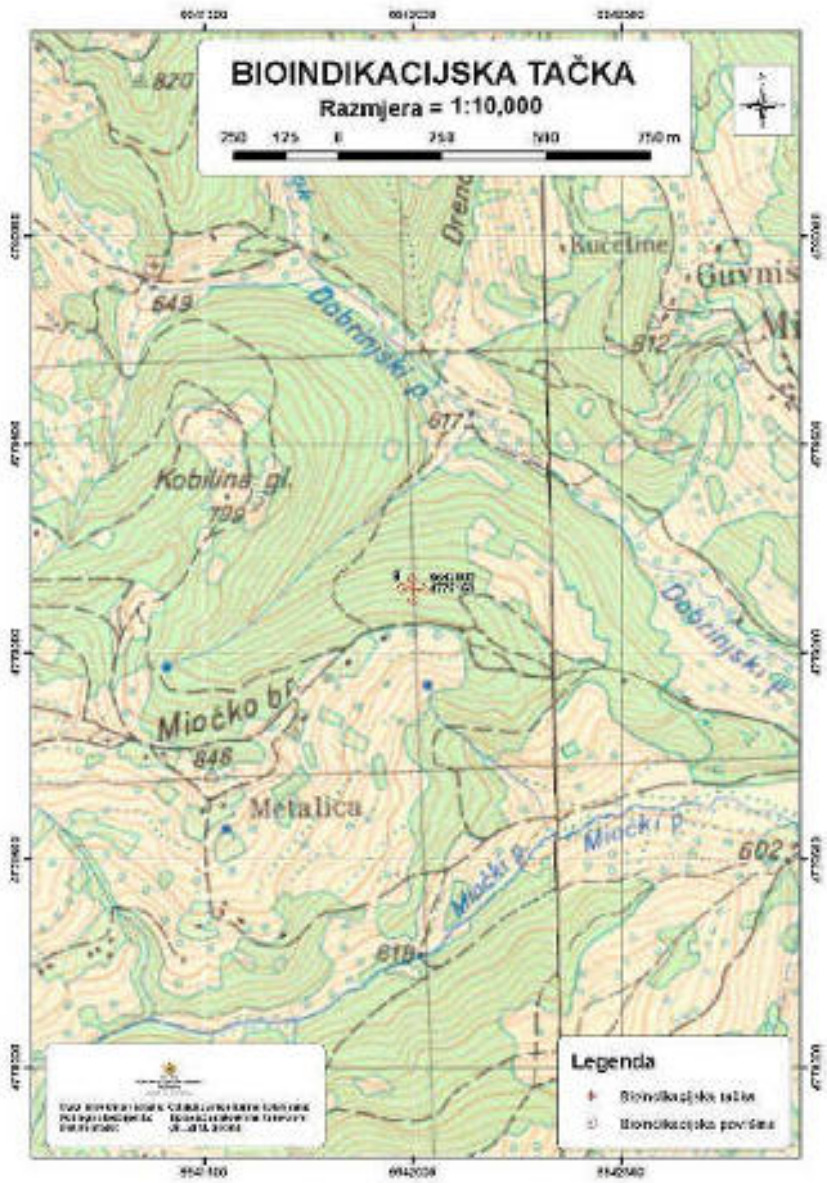
Tačka 9/Point 9.



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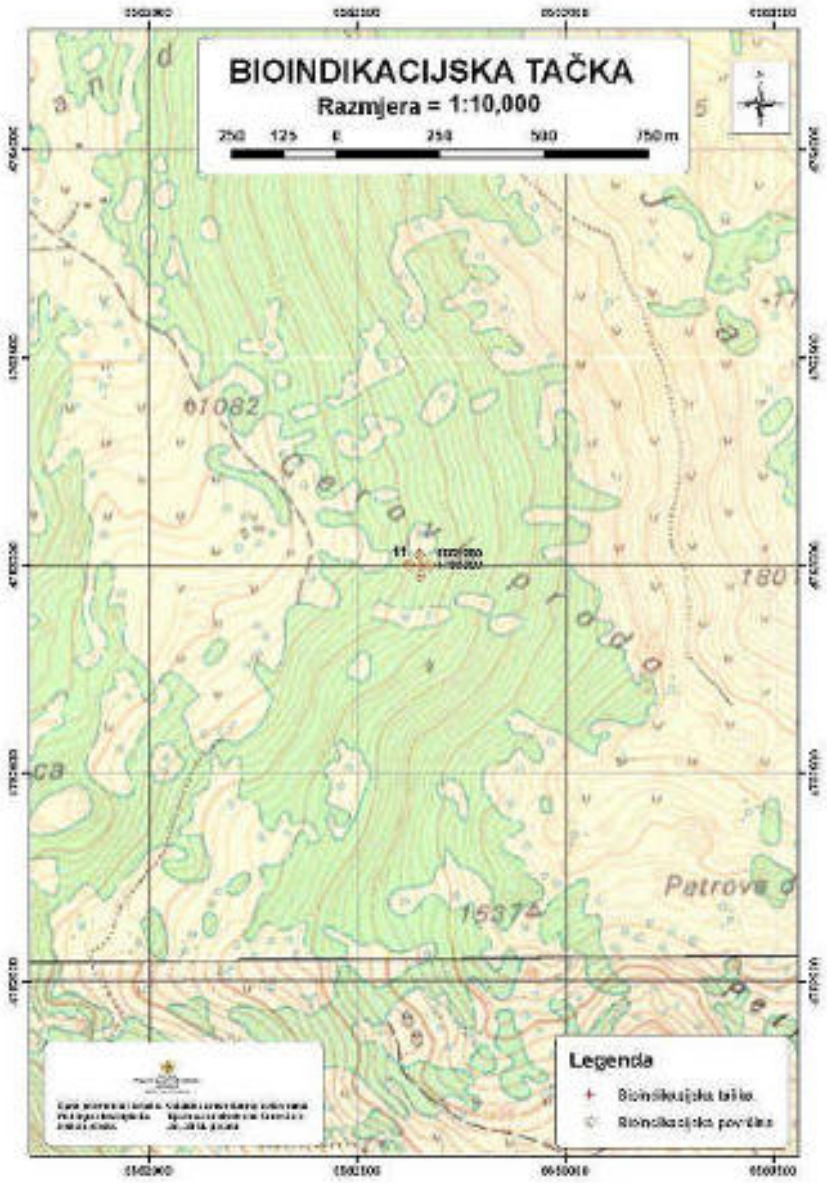
Tačka 11/Point 11.



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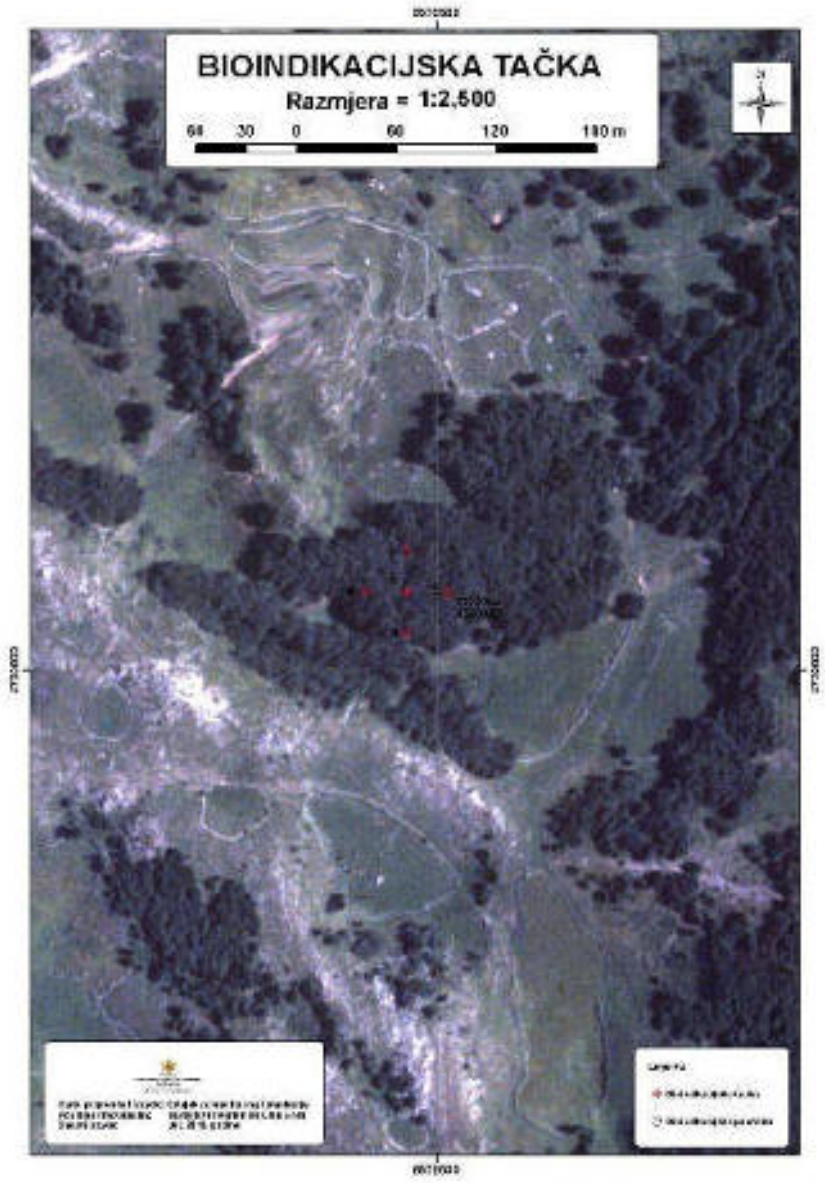

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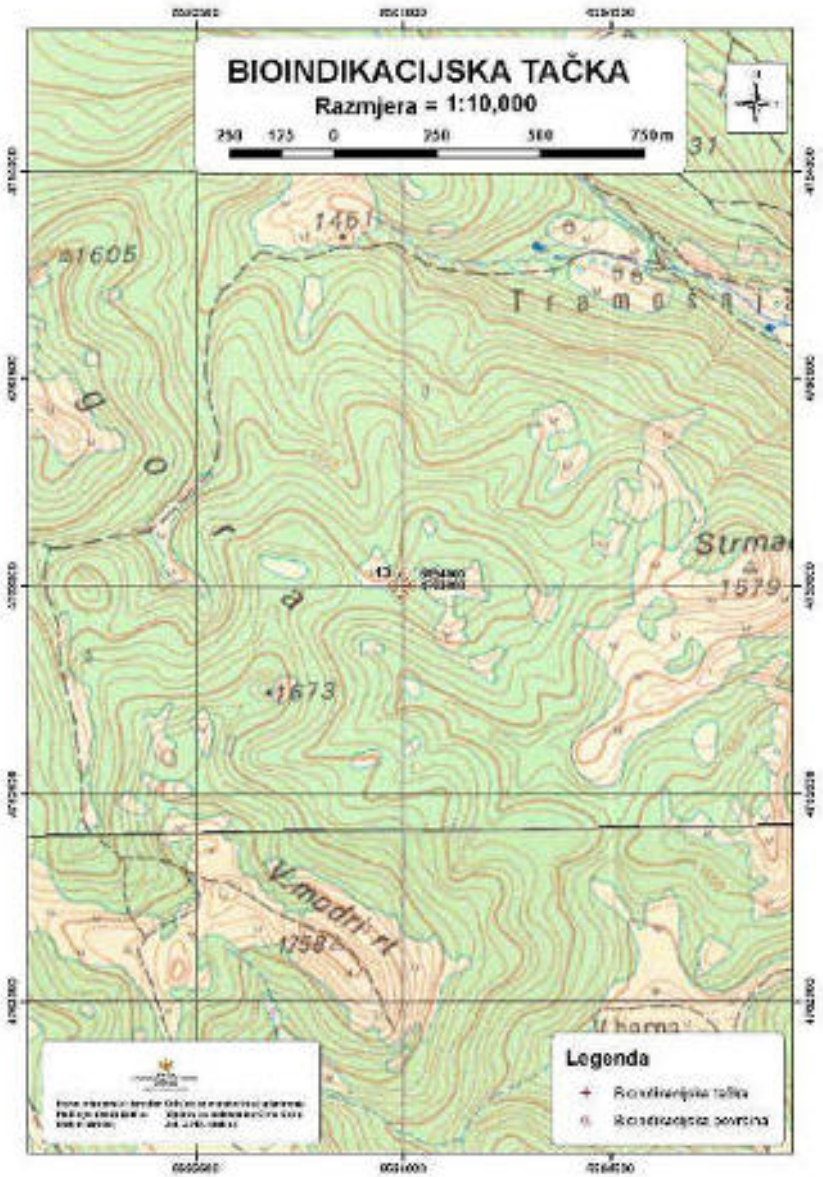

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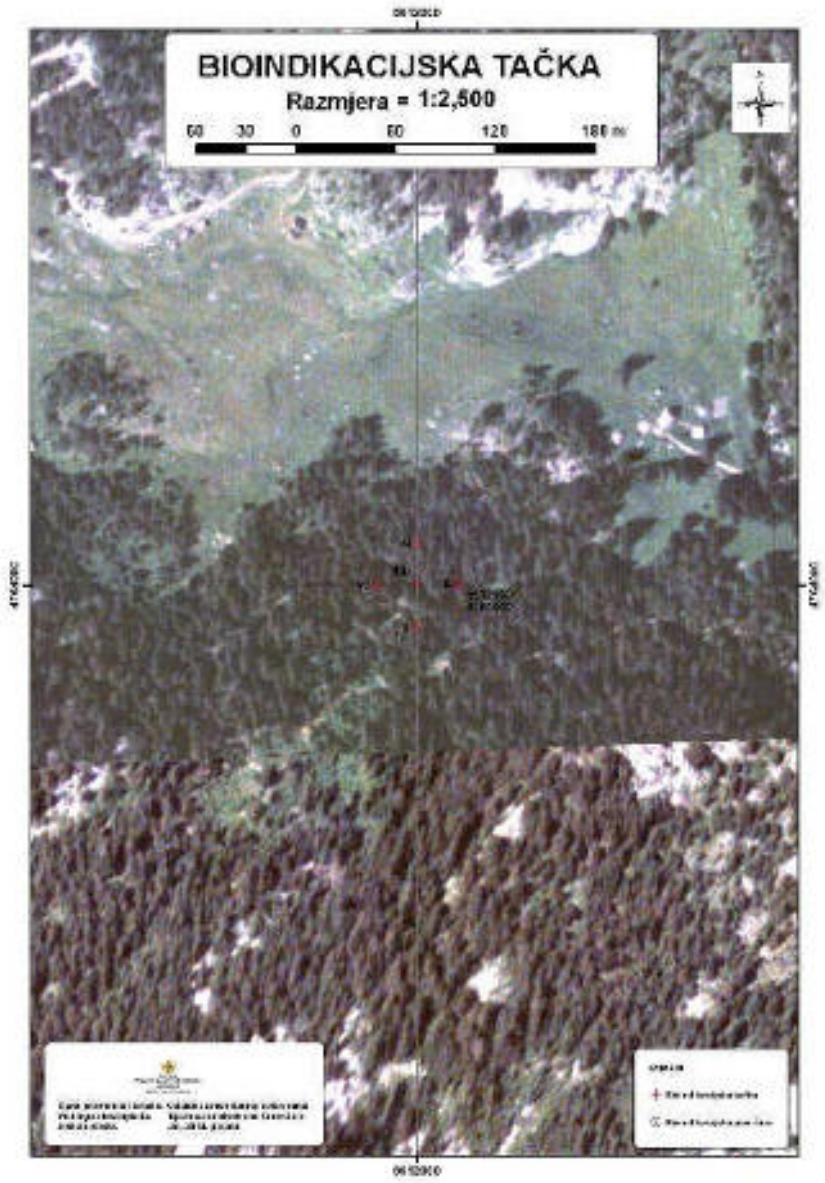

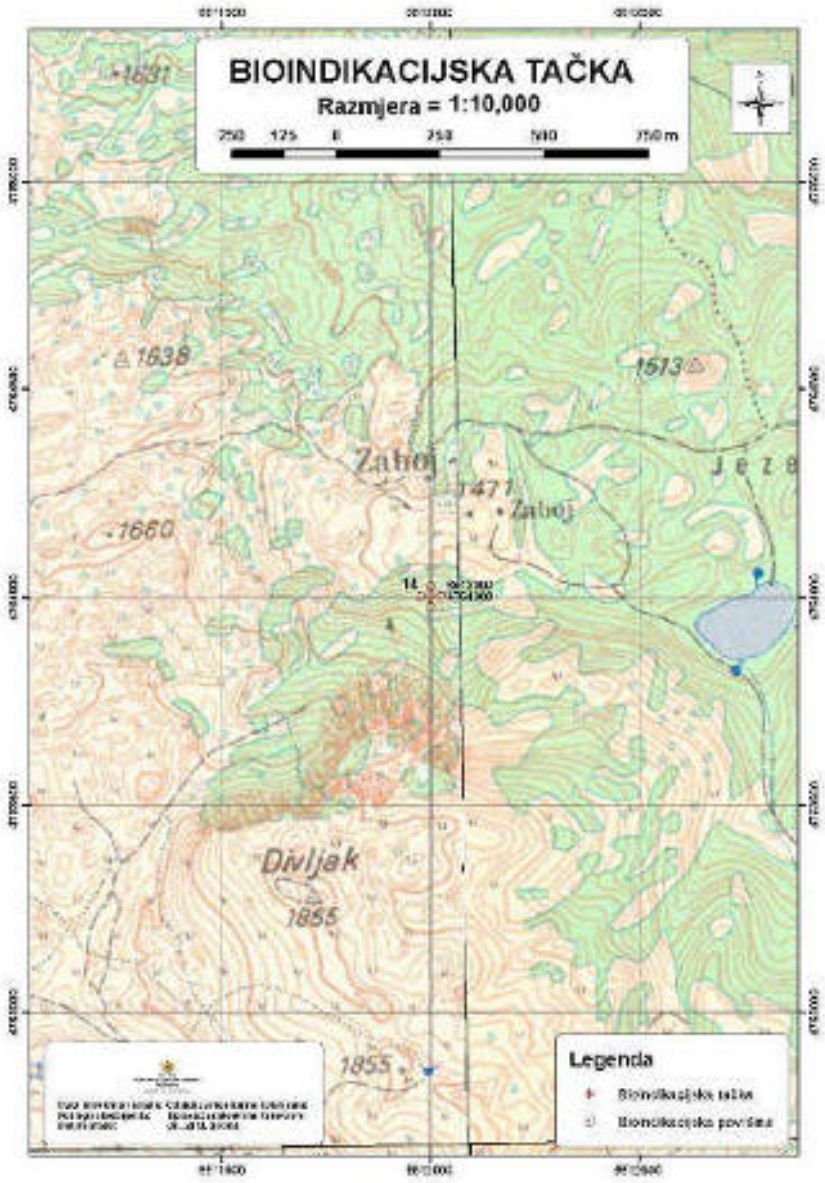

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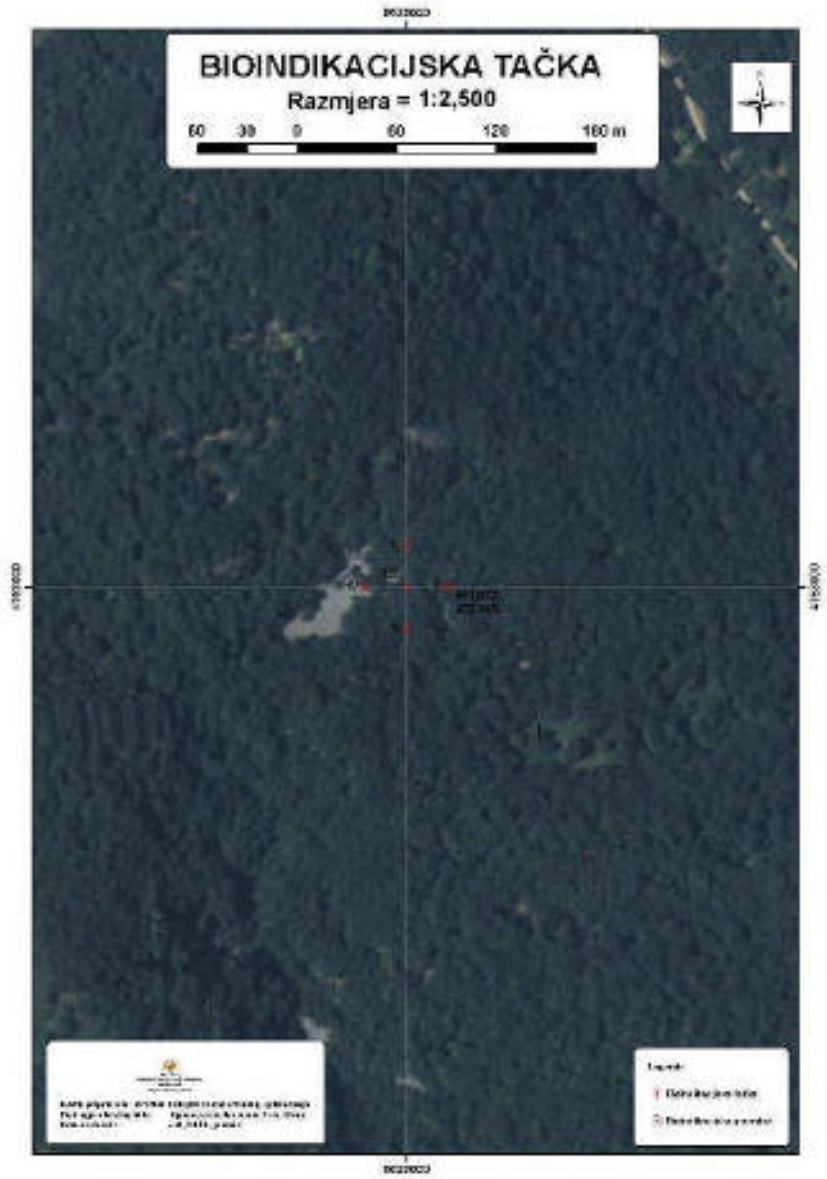

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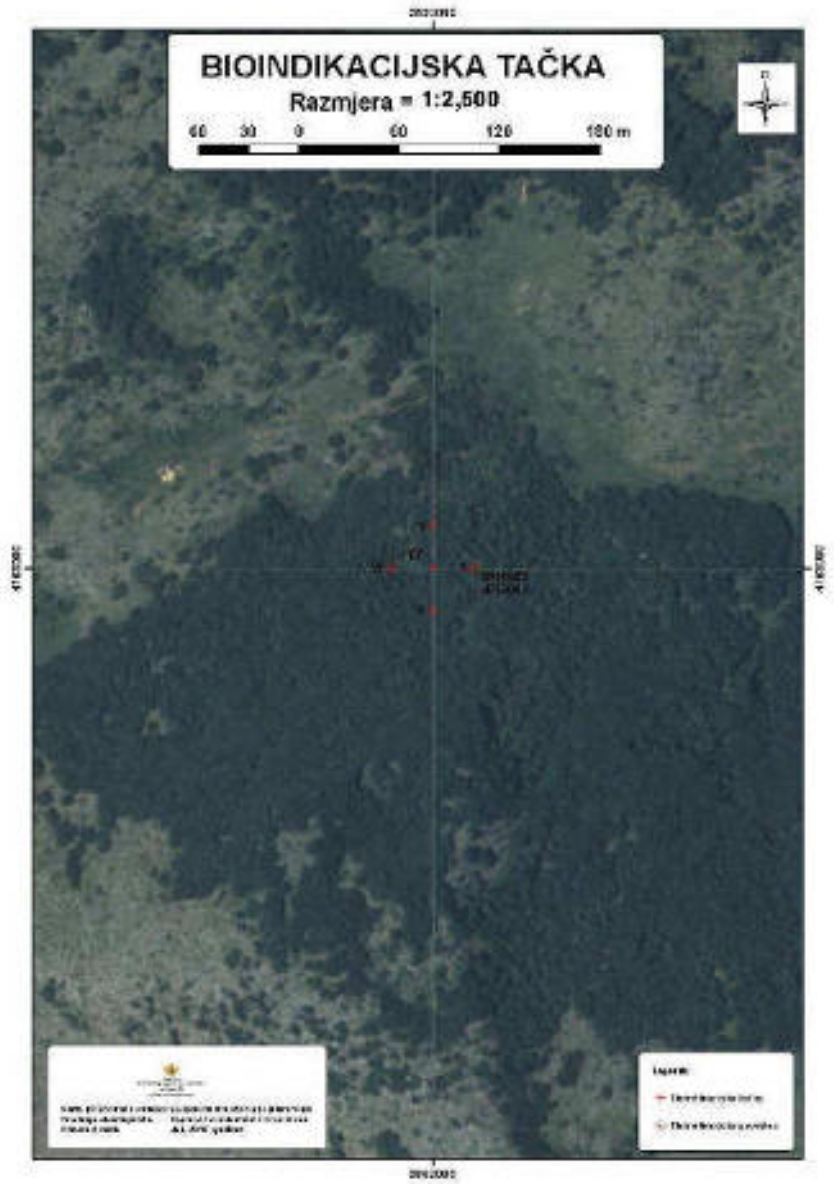
Tačka 17/Point 17.



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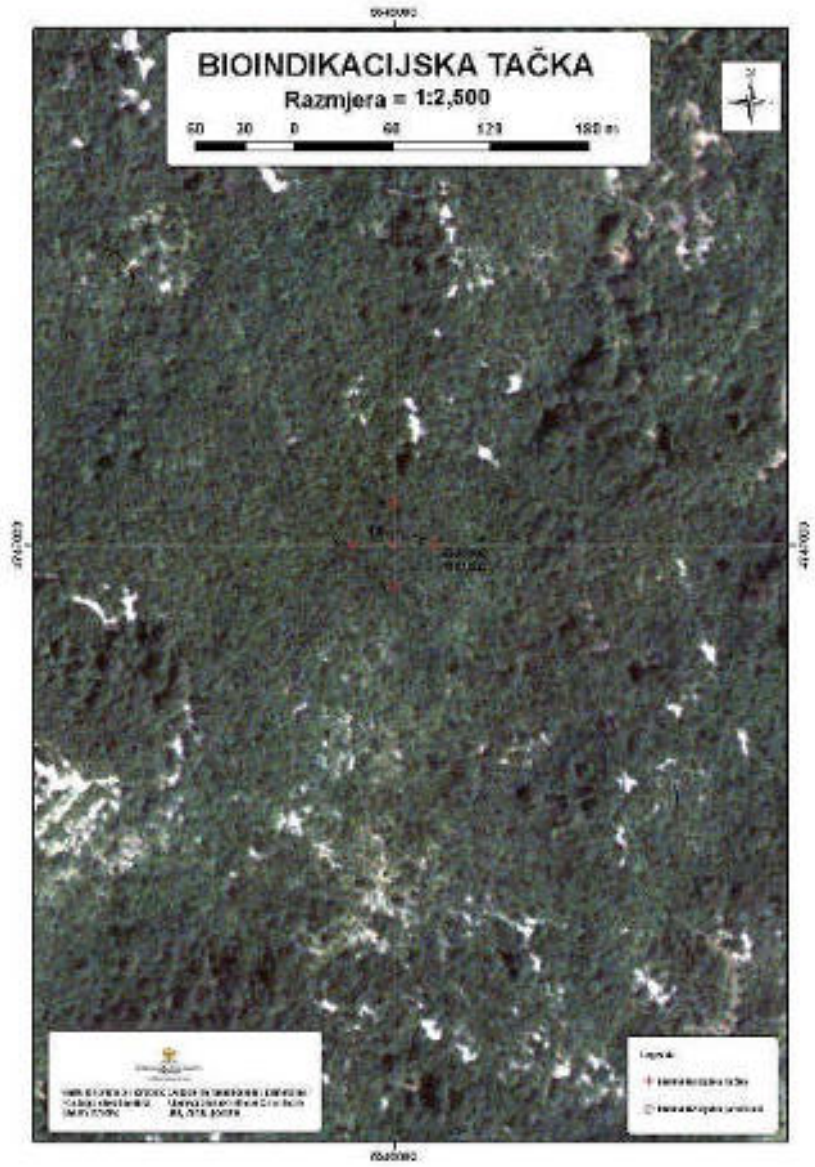

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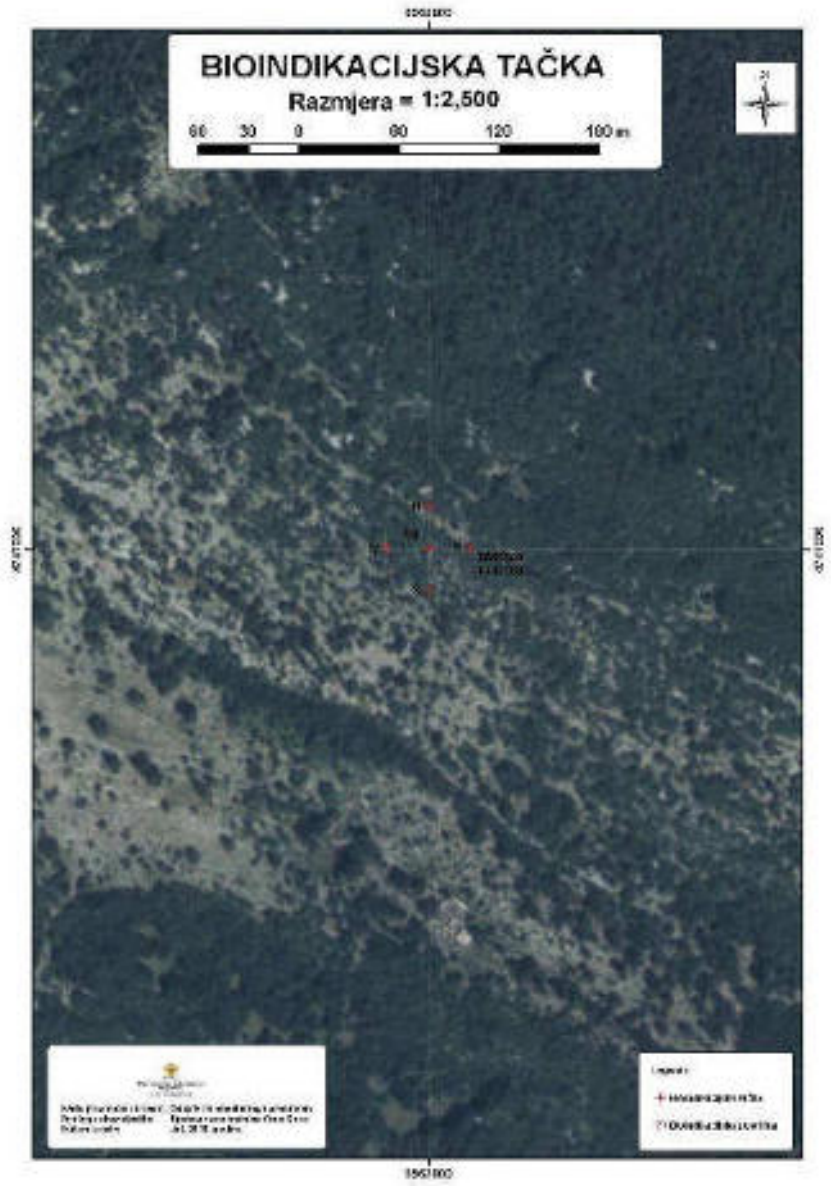

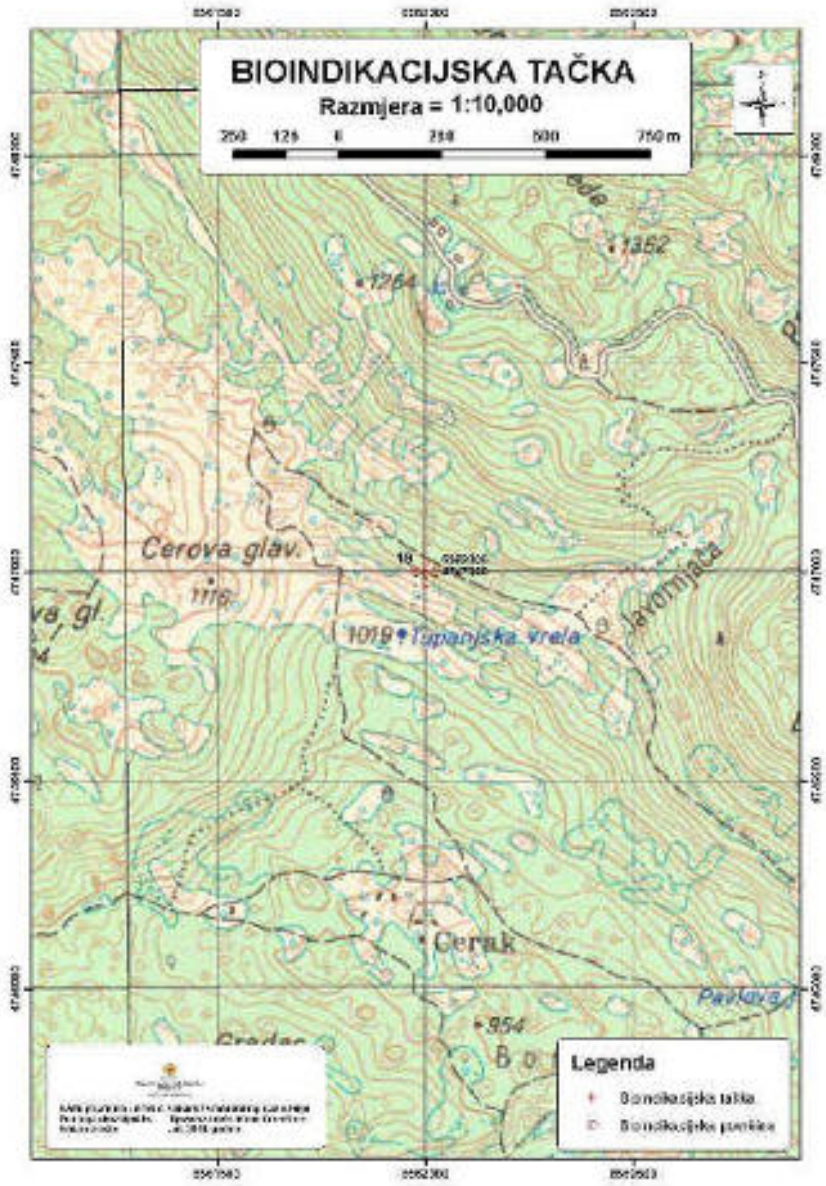

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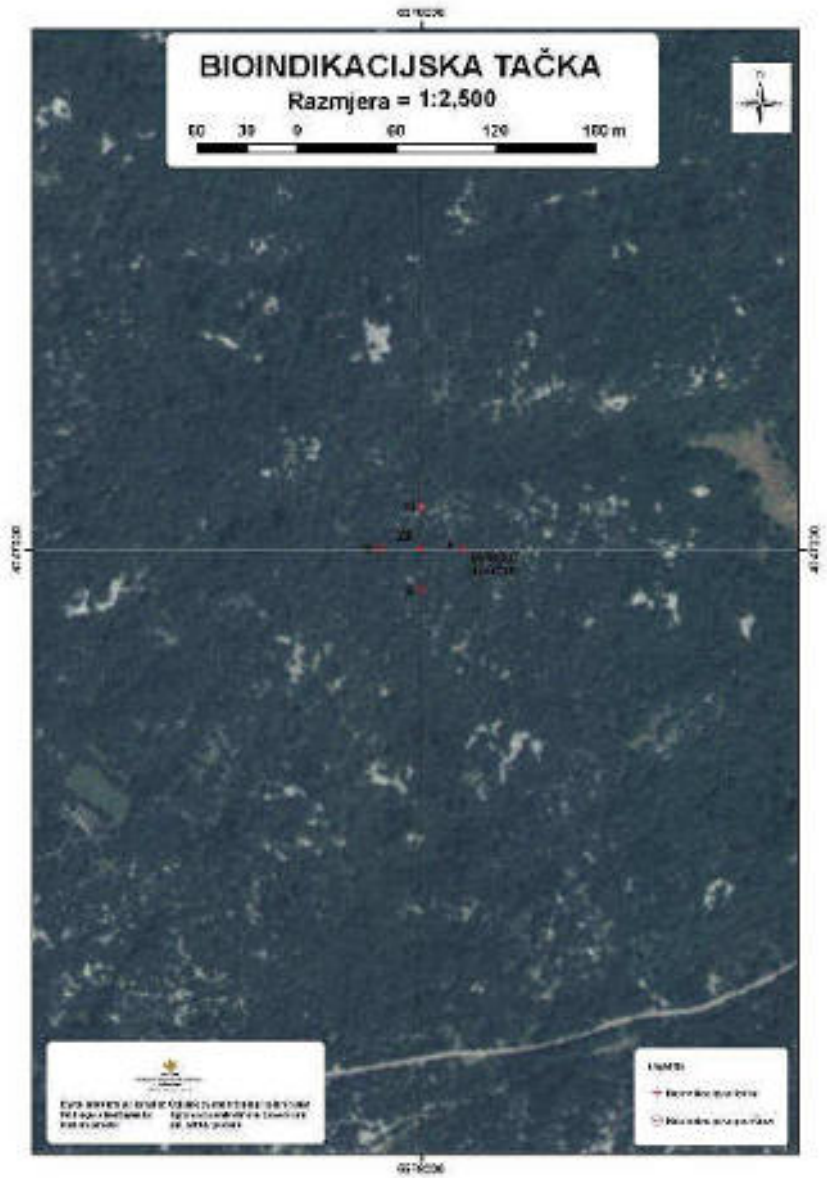

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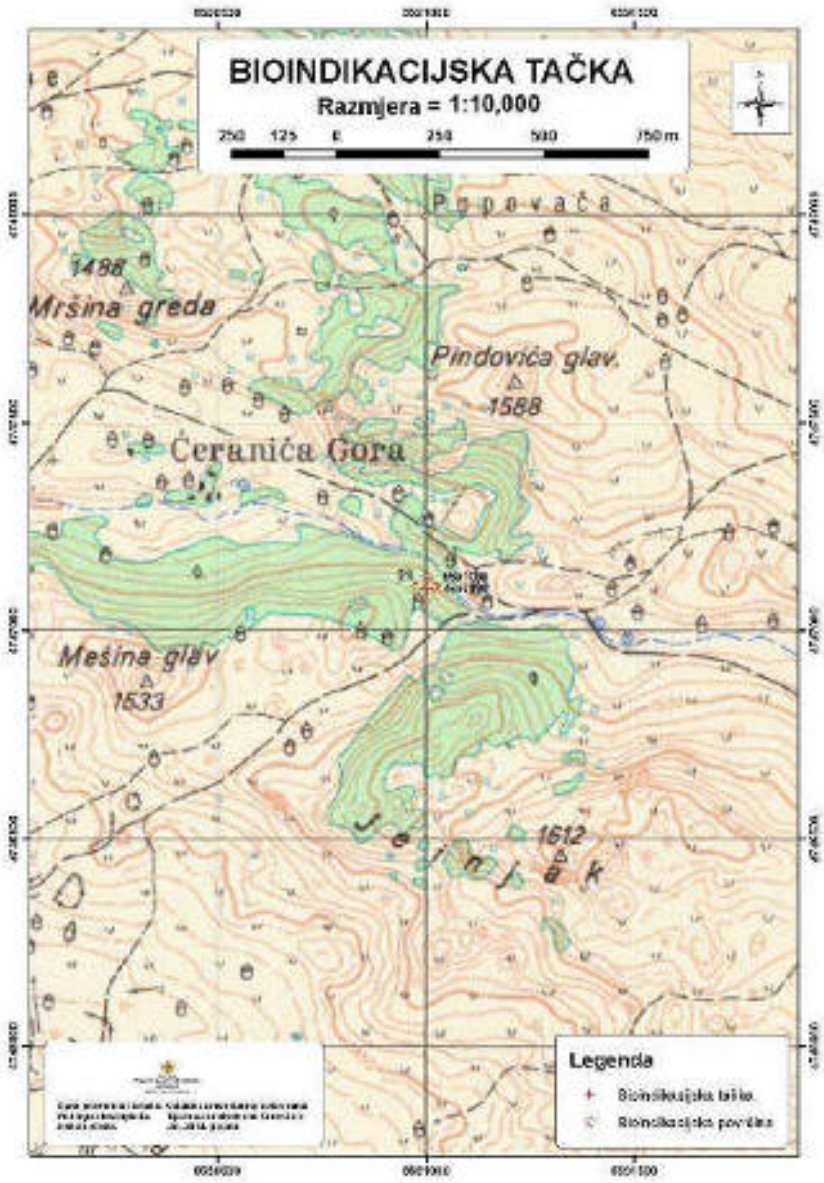
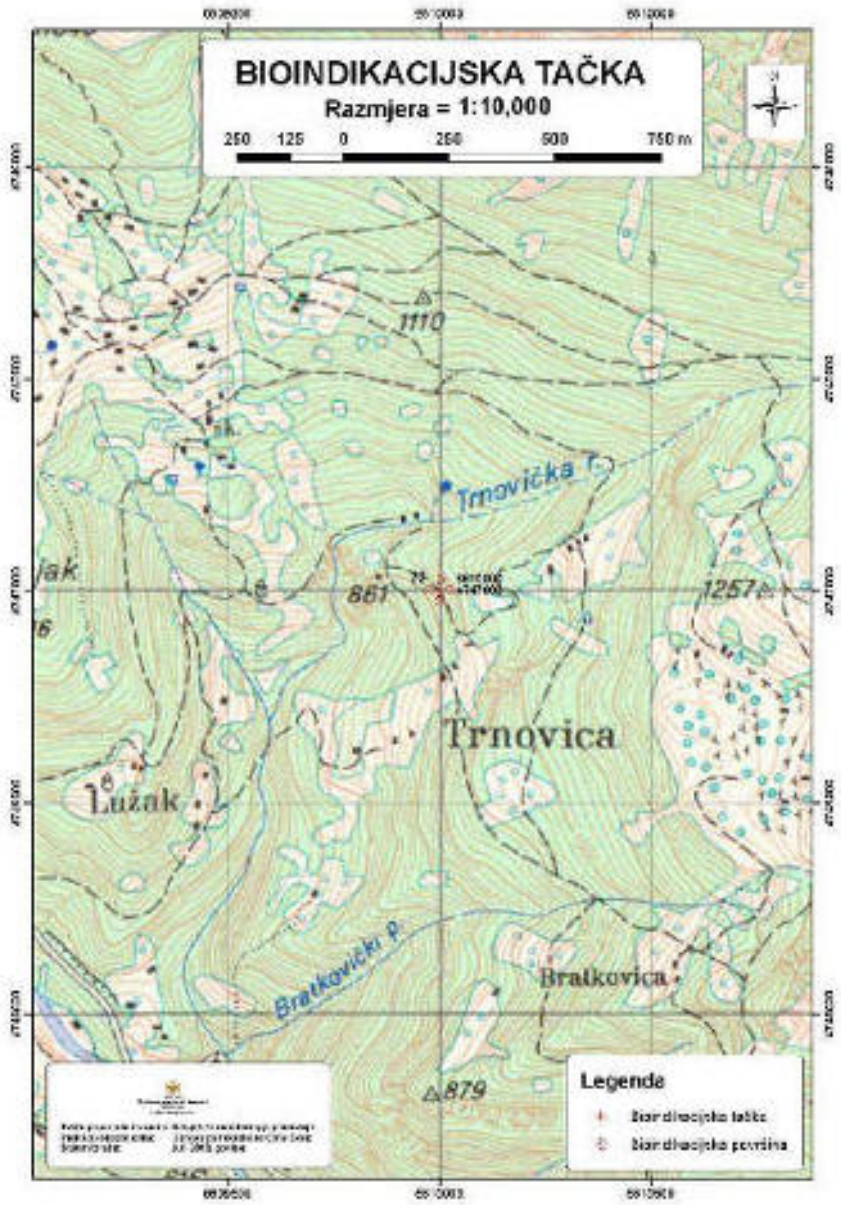
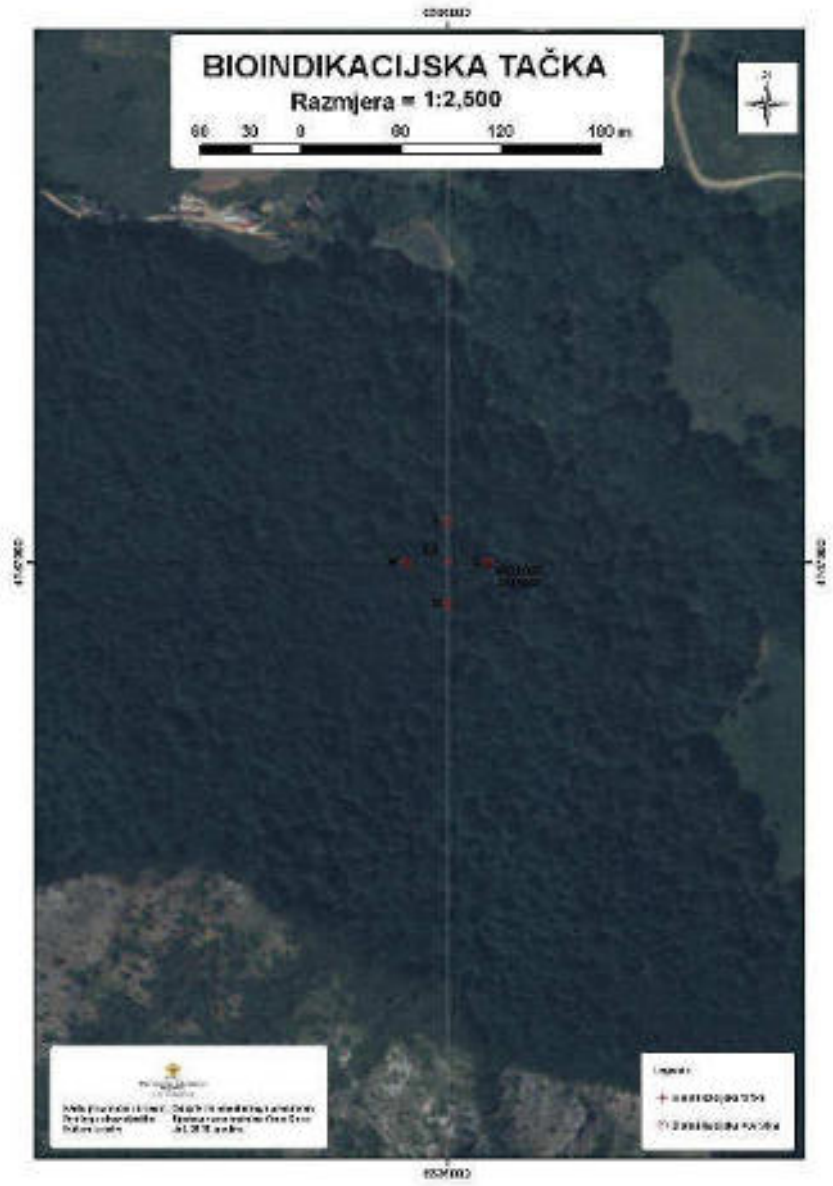
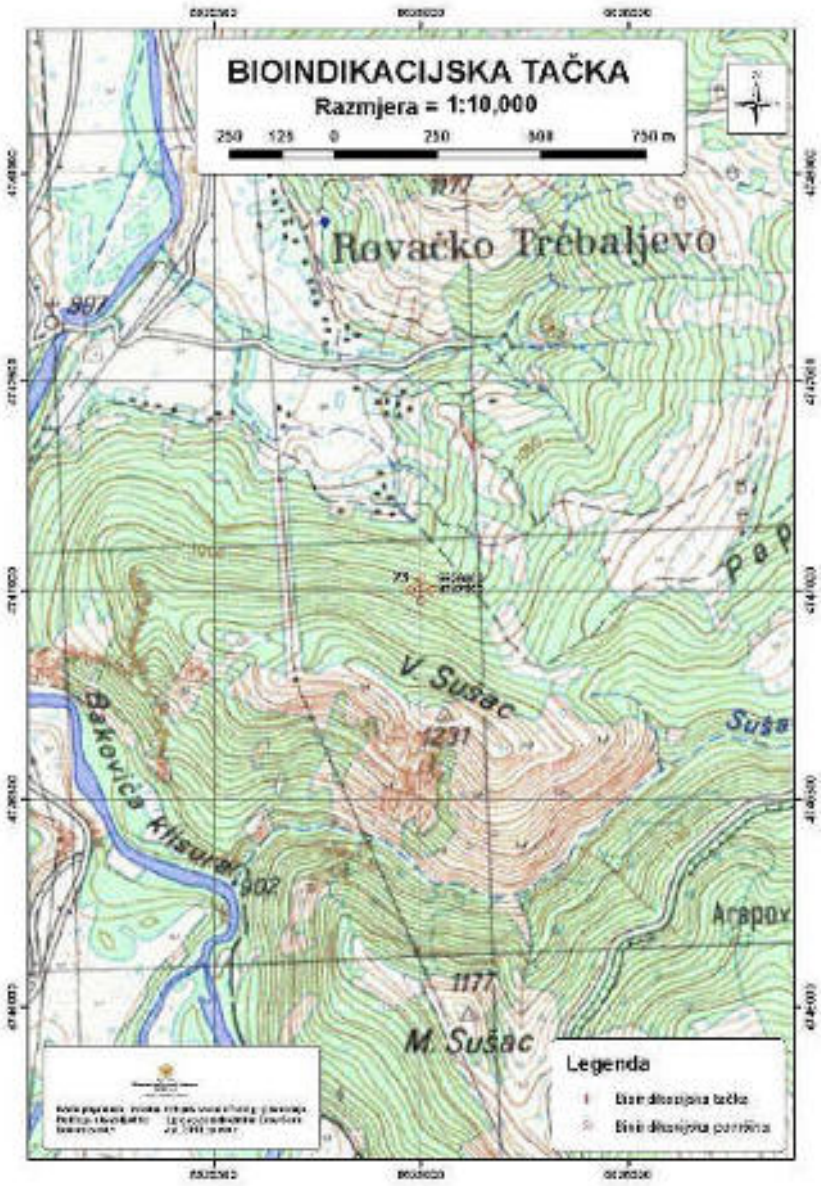


Tačka 22/Point 22.



Tačka 23/Point 23.





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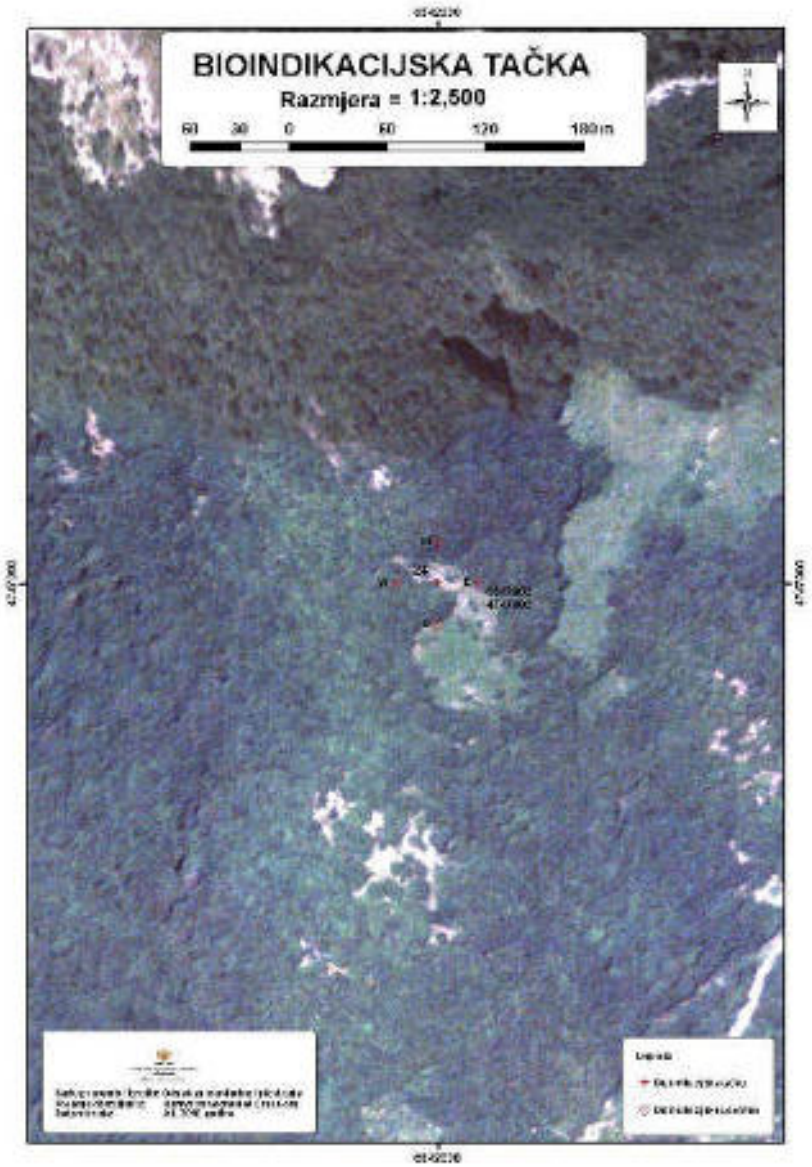

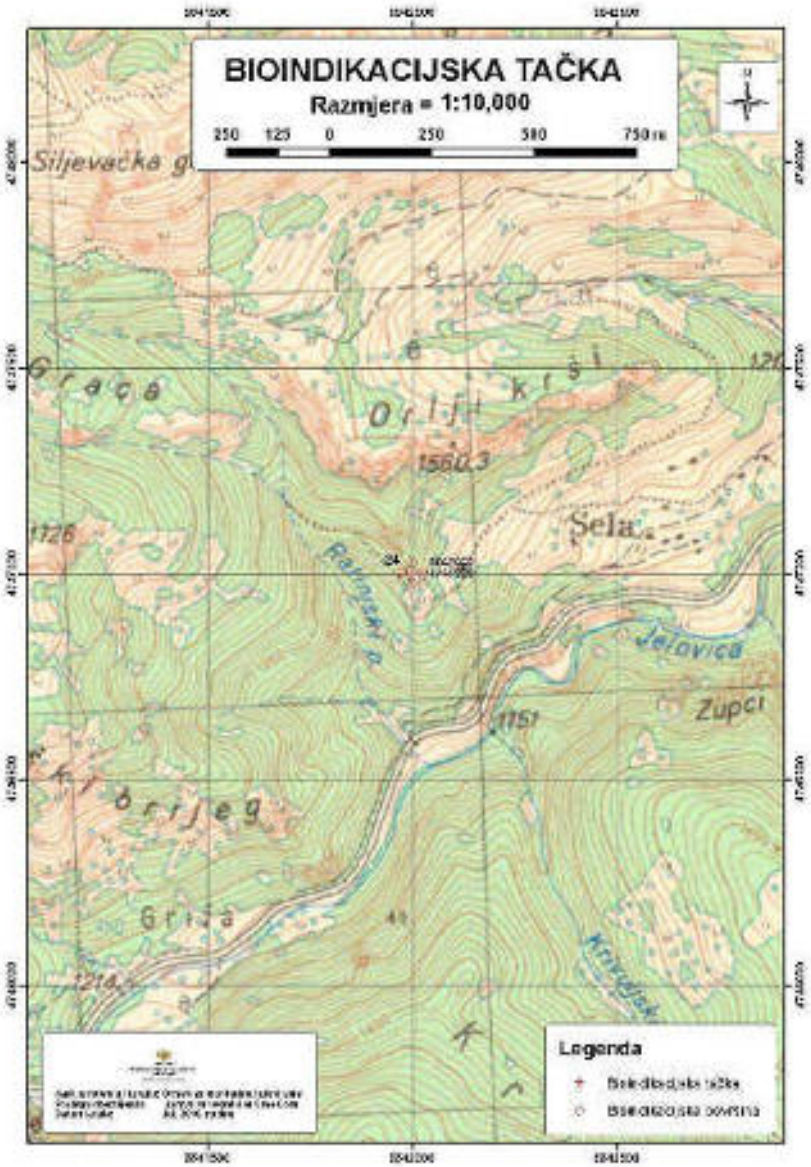

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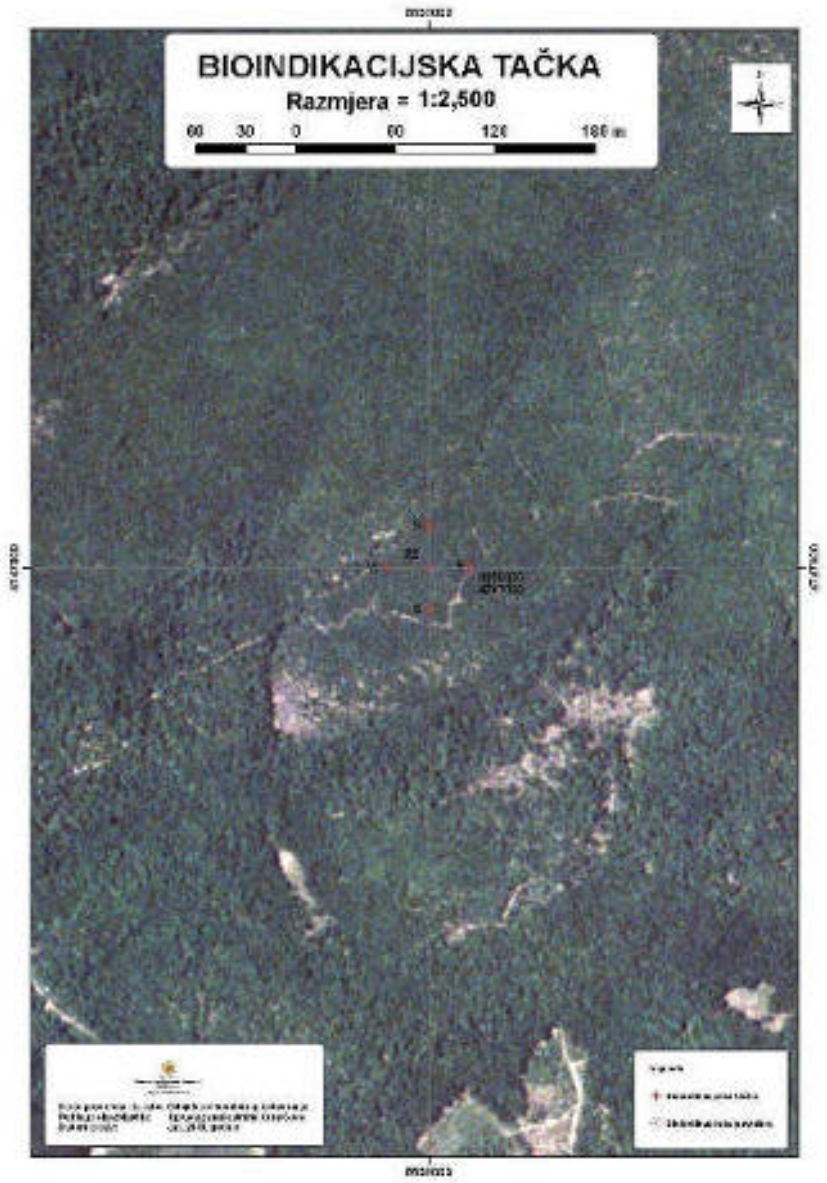
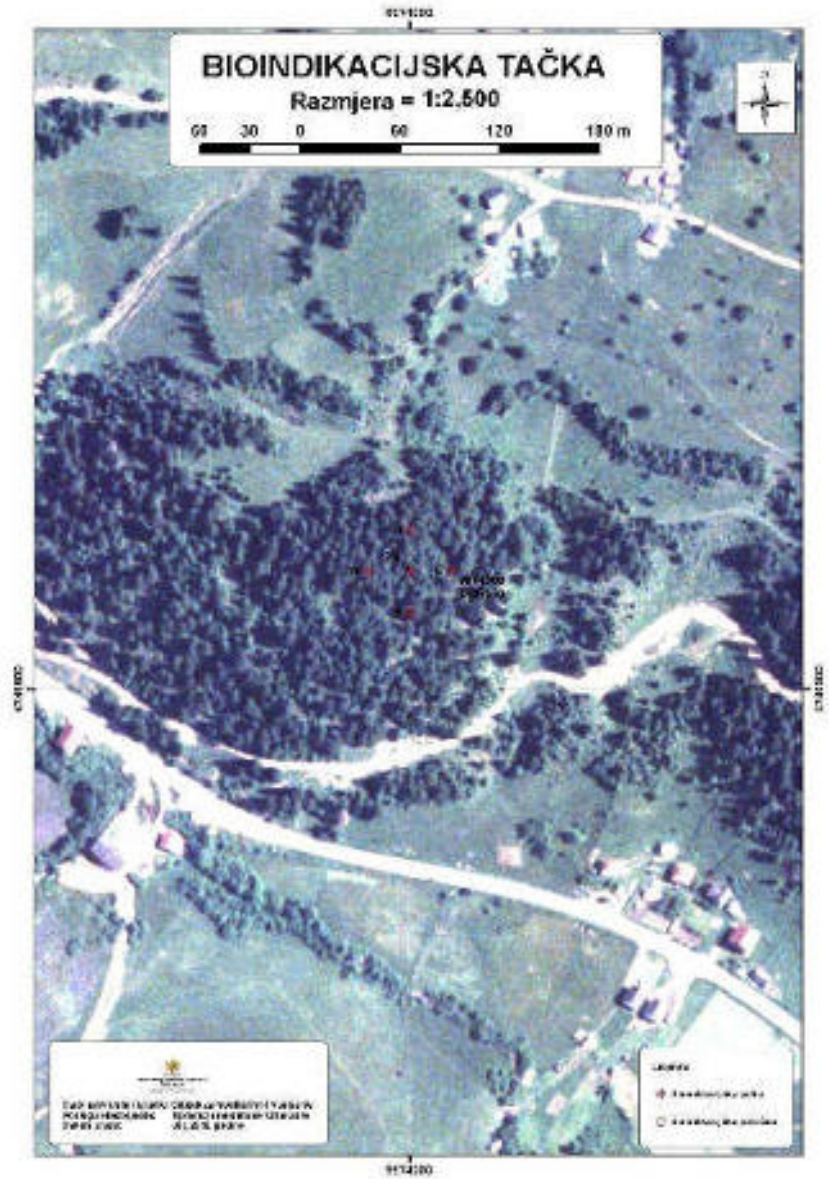
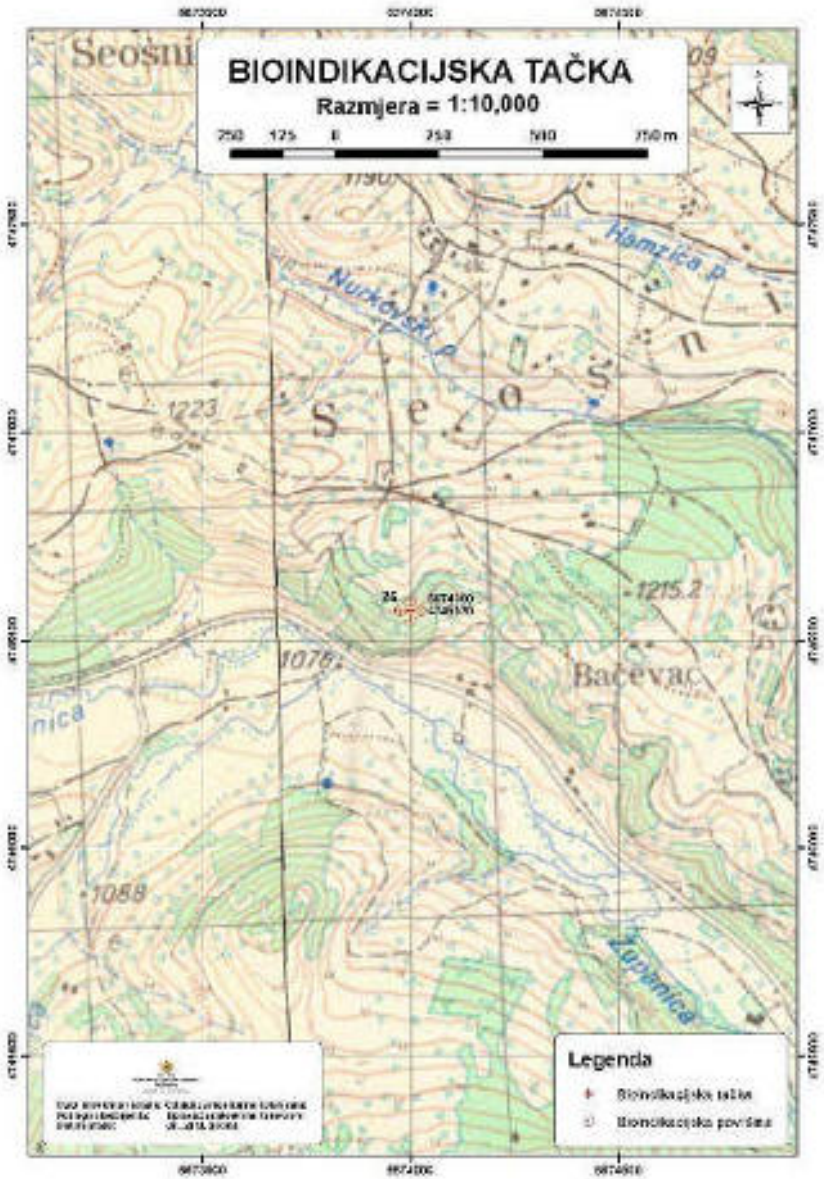
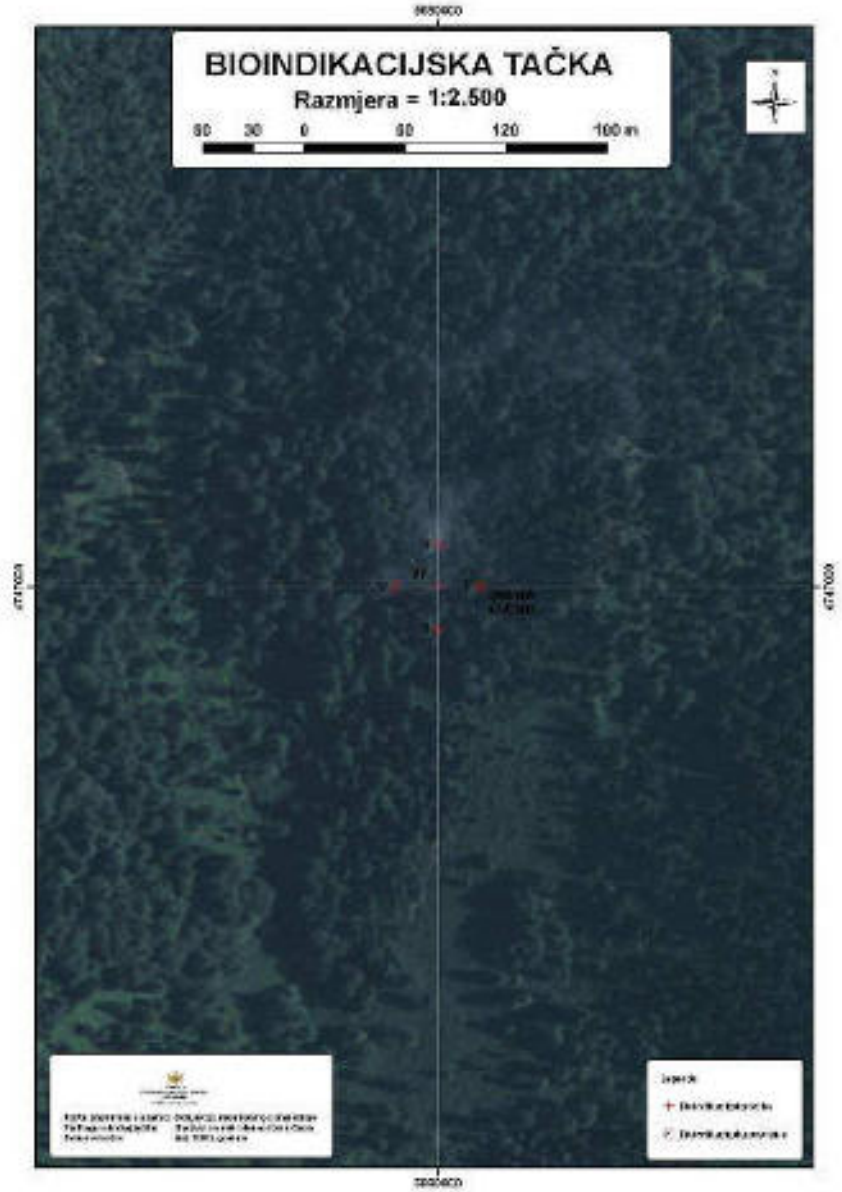


Tačka 26/Point 26.

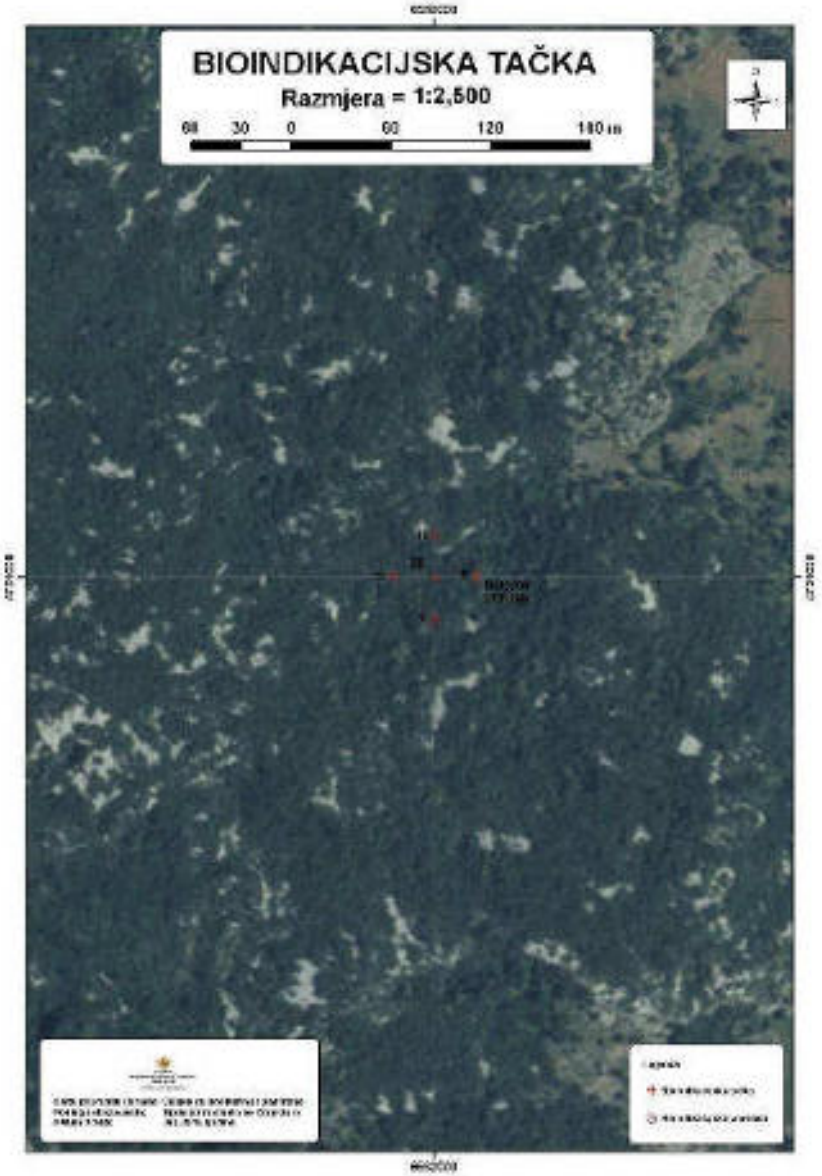




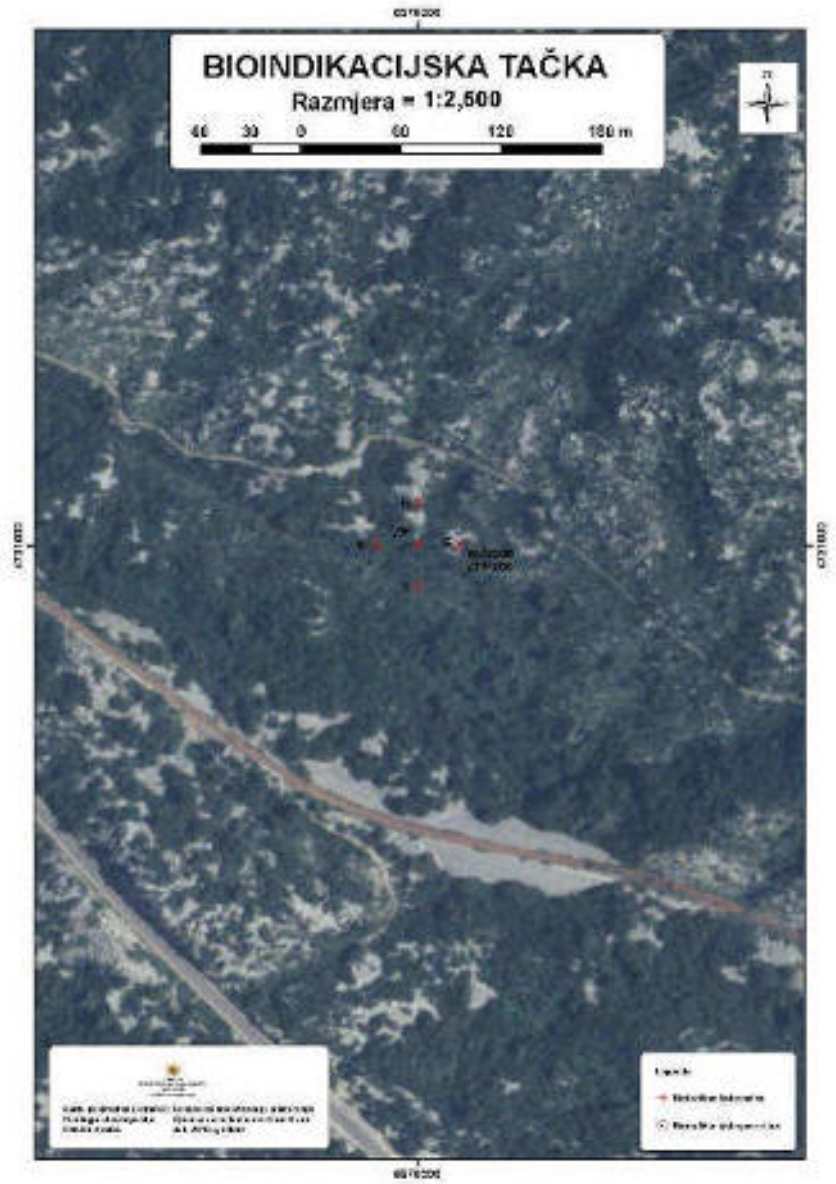
Tačka 27/Point 27.



Tačka 28/Point 28.

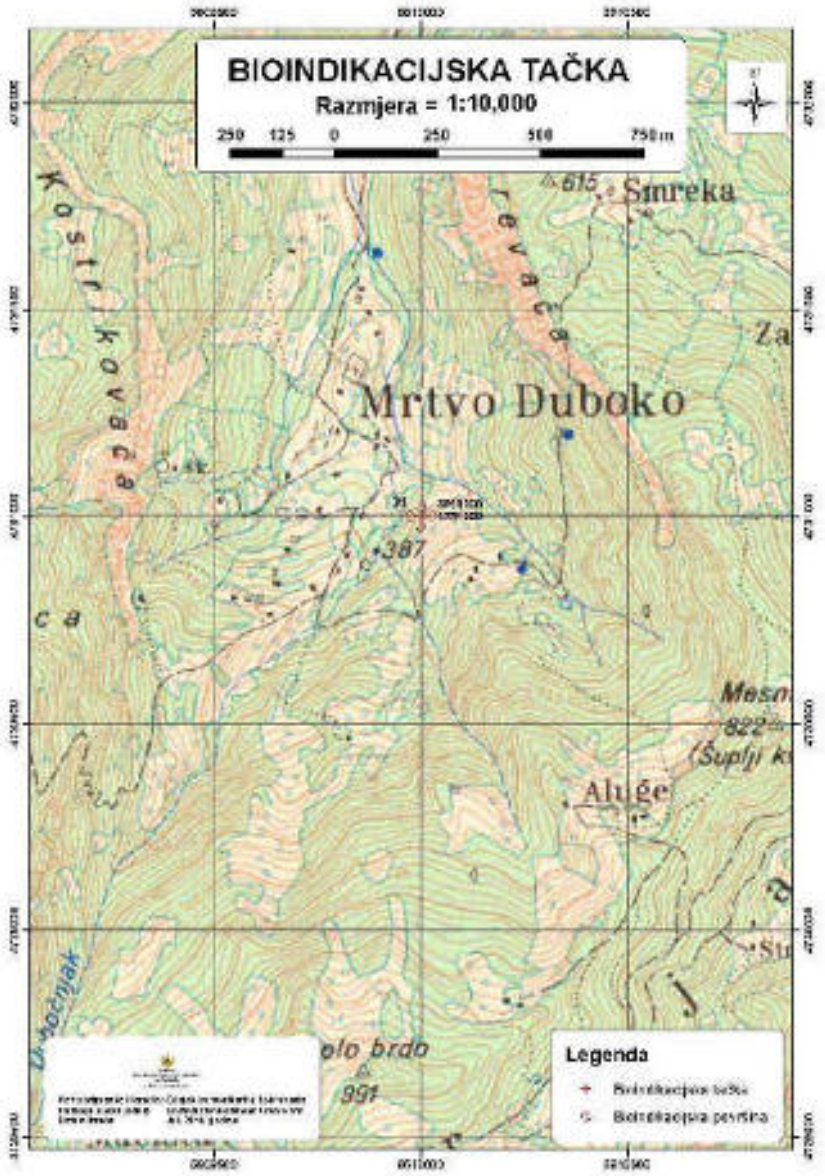


Tačka 29/Point 29.

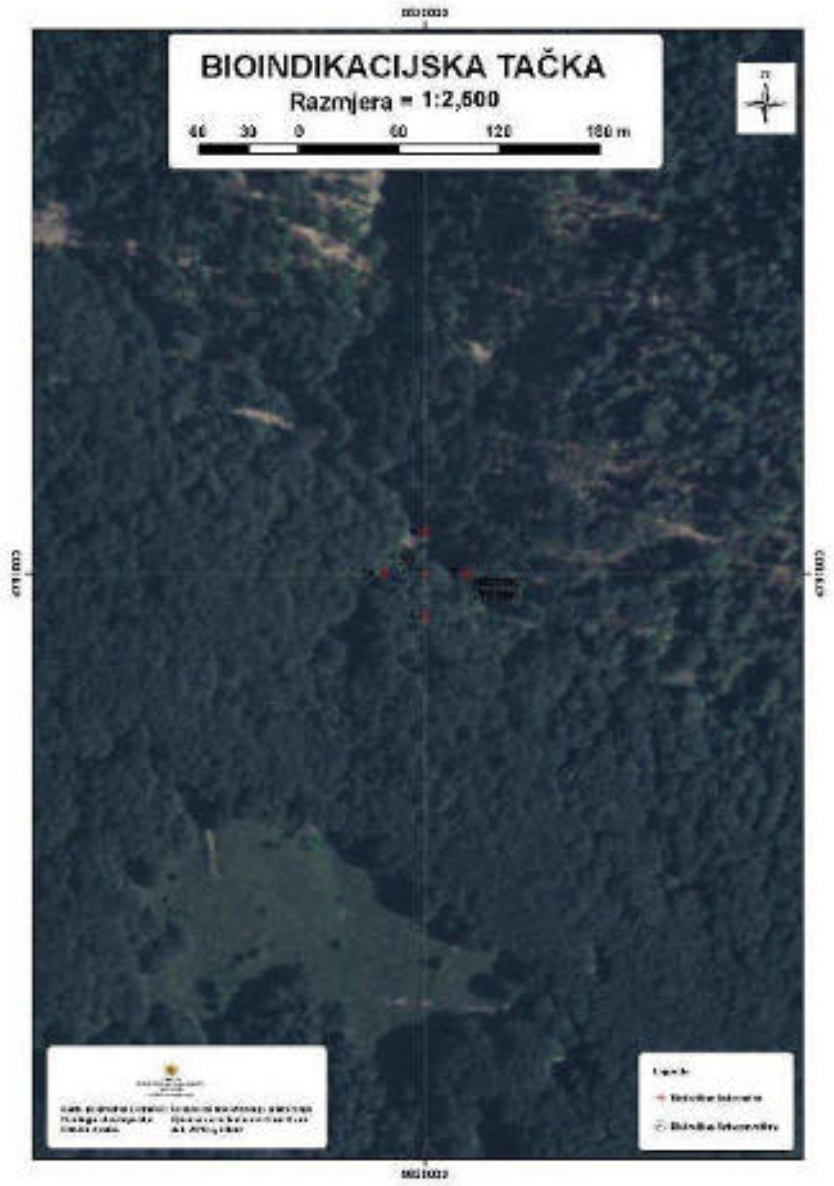


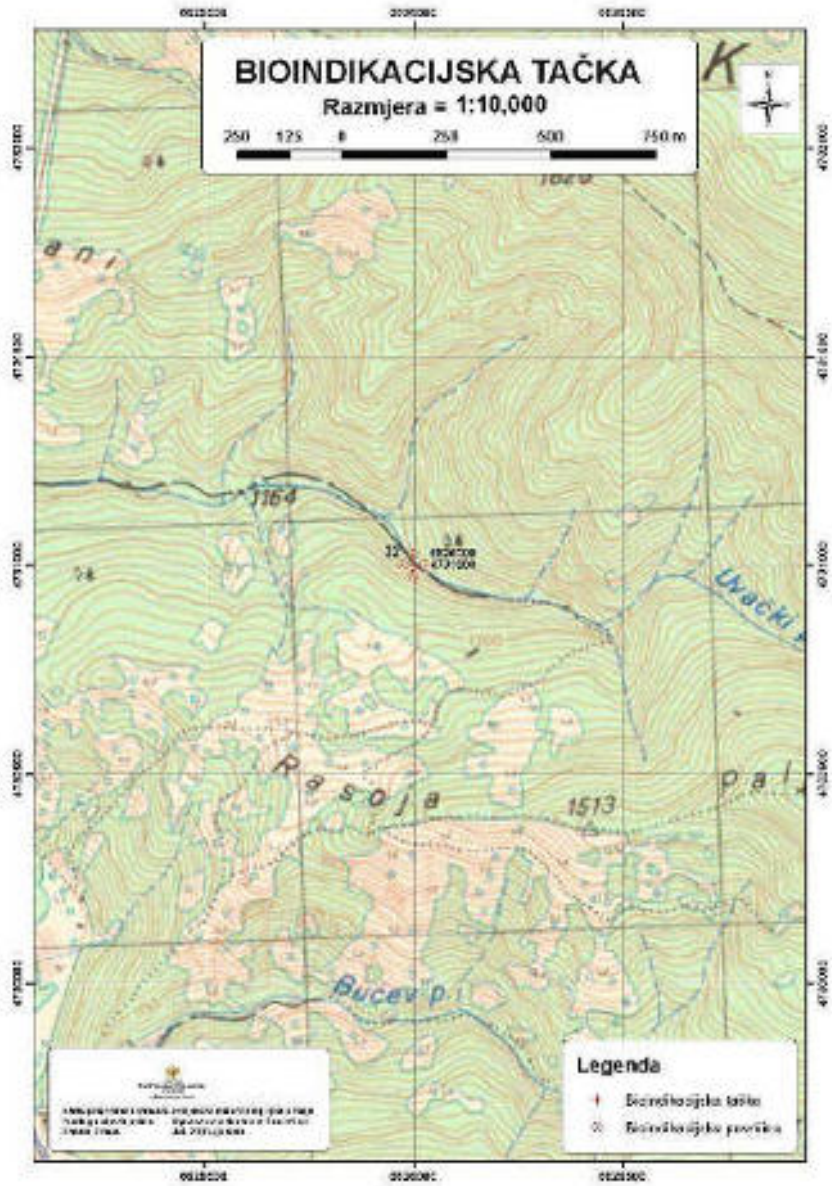
Tačka 30/Point 30.

Tačka 31/Point 31.



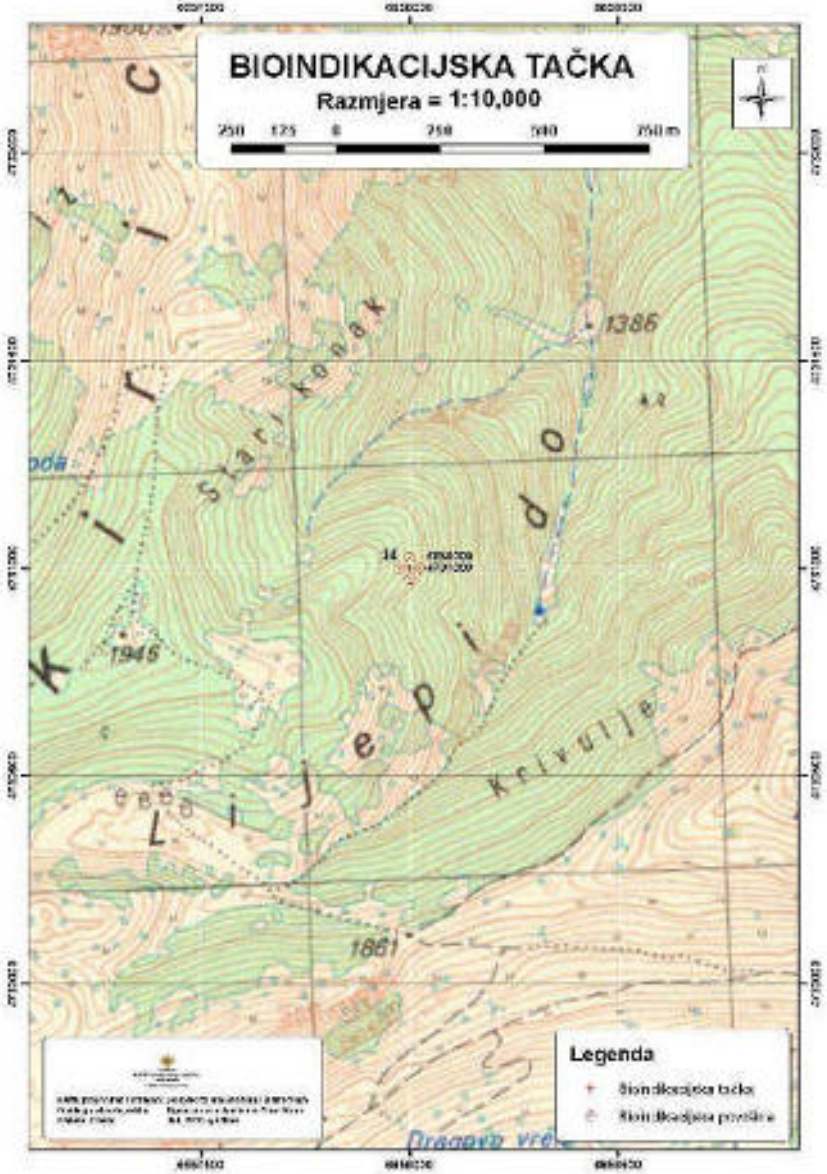
Tačka 32/Point 32.



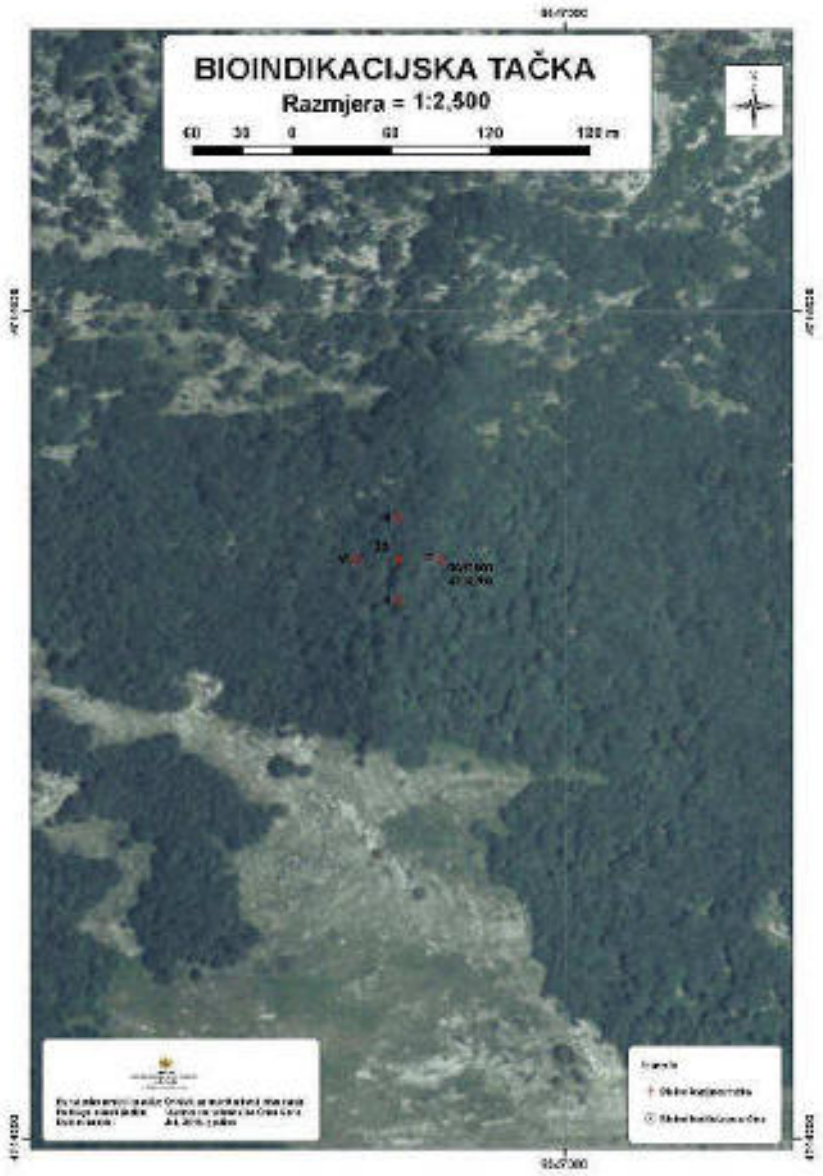


Tačka 33/Point 33.

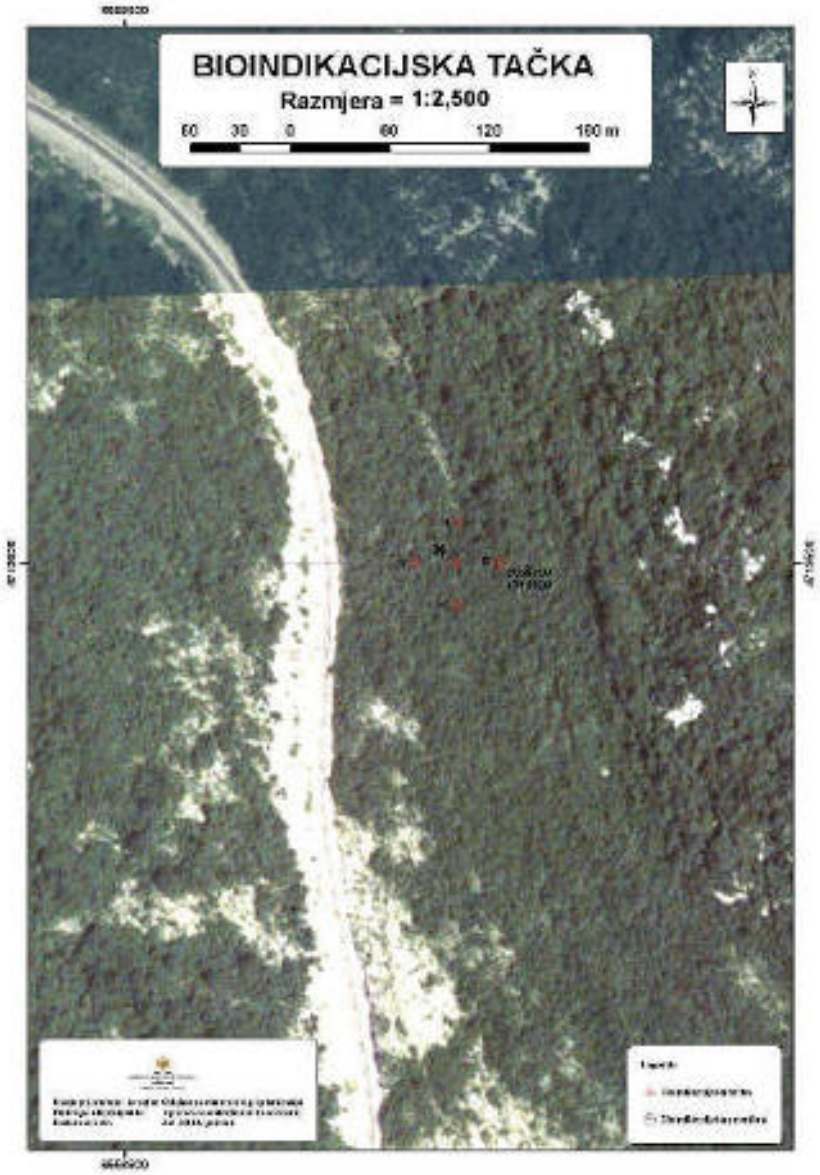
Tačka 34/Point 34.



Tačka 35/Point 35.



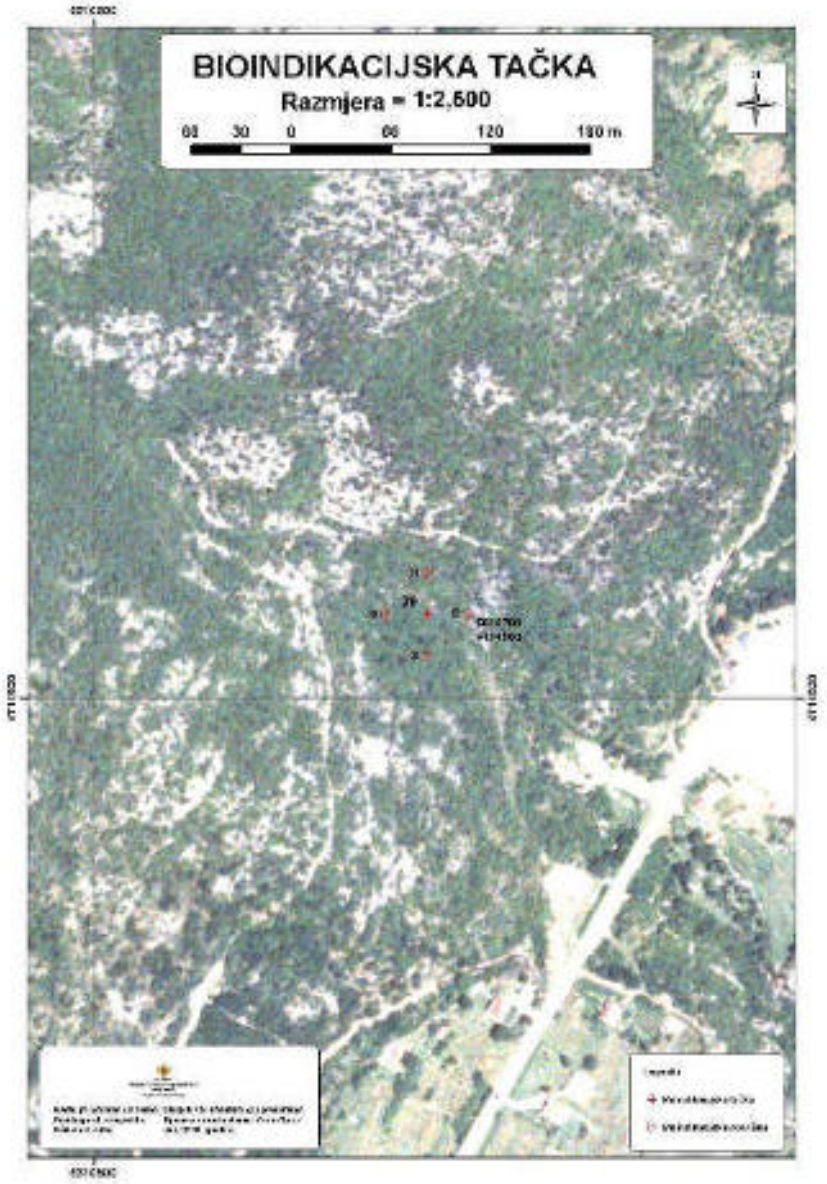
Tačka 36/Point 36.

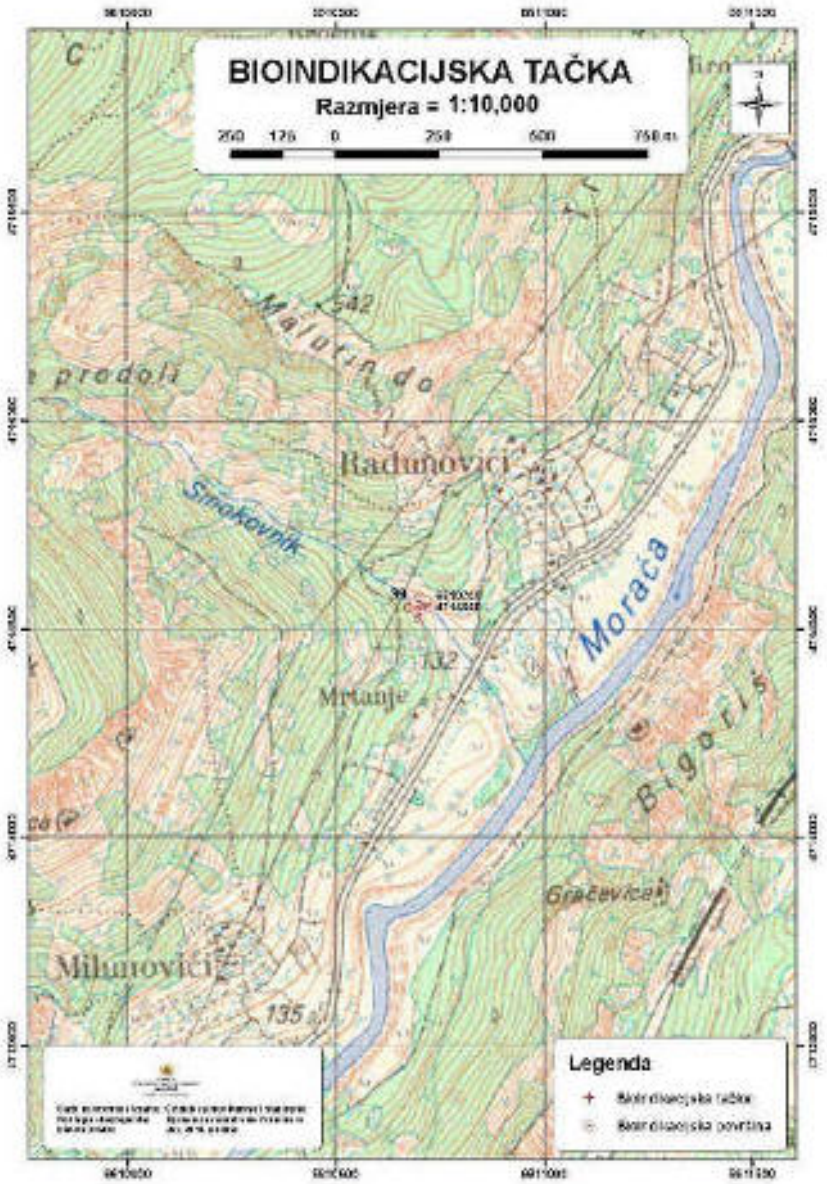


Tačka 37/Point 37.

Tačka 38/Point 38.

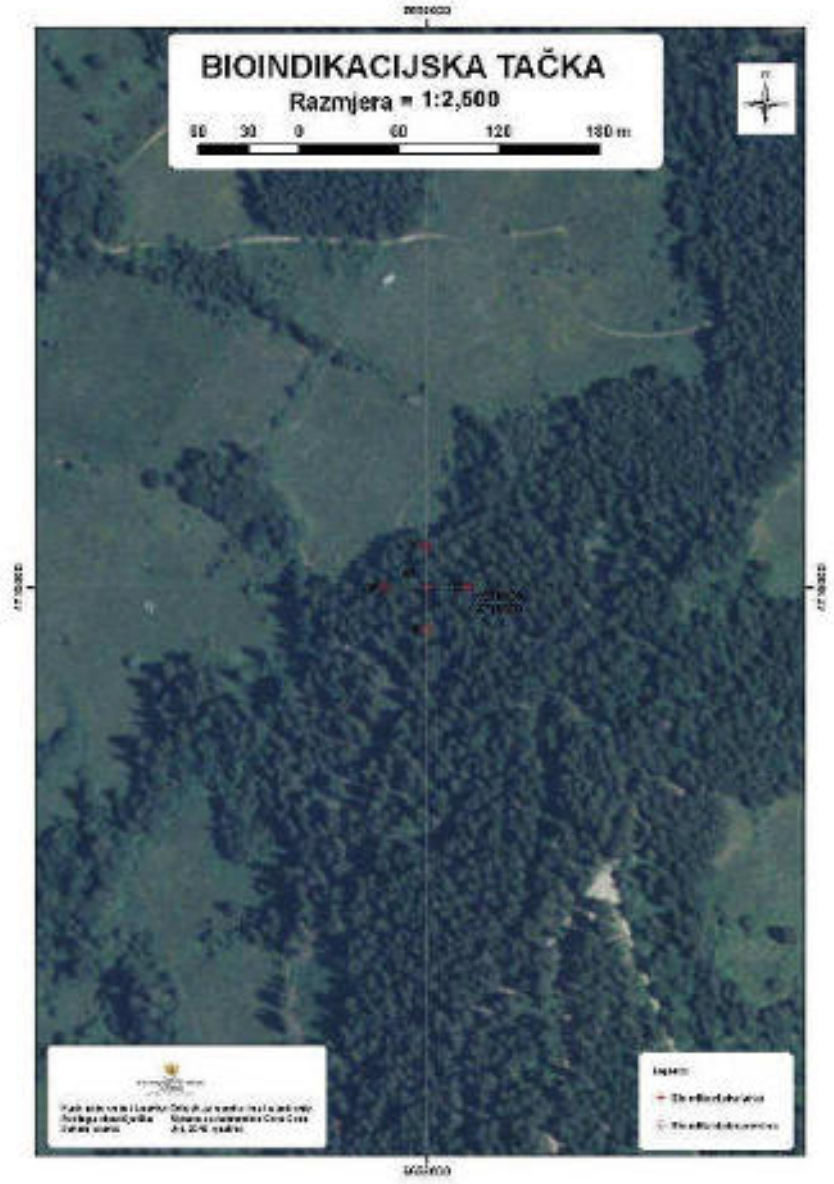
Tačka 39/Point 39.



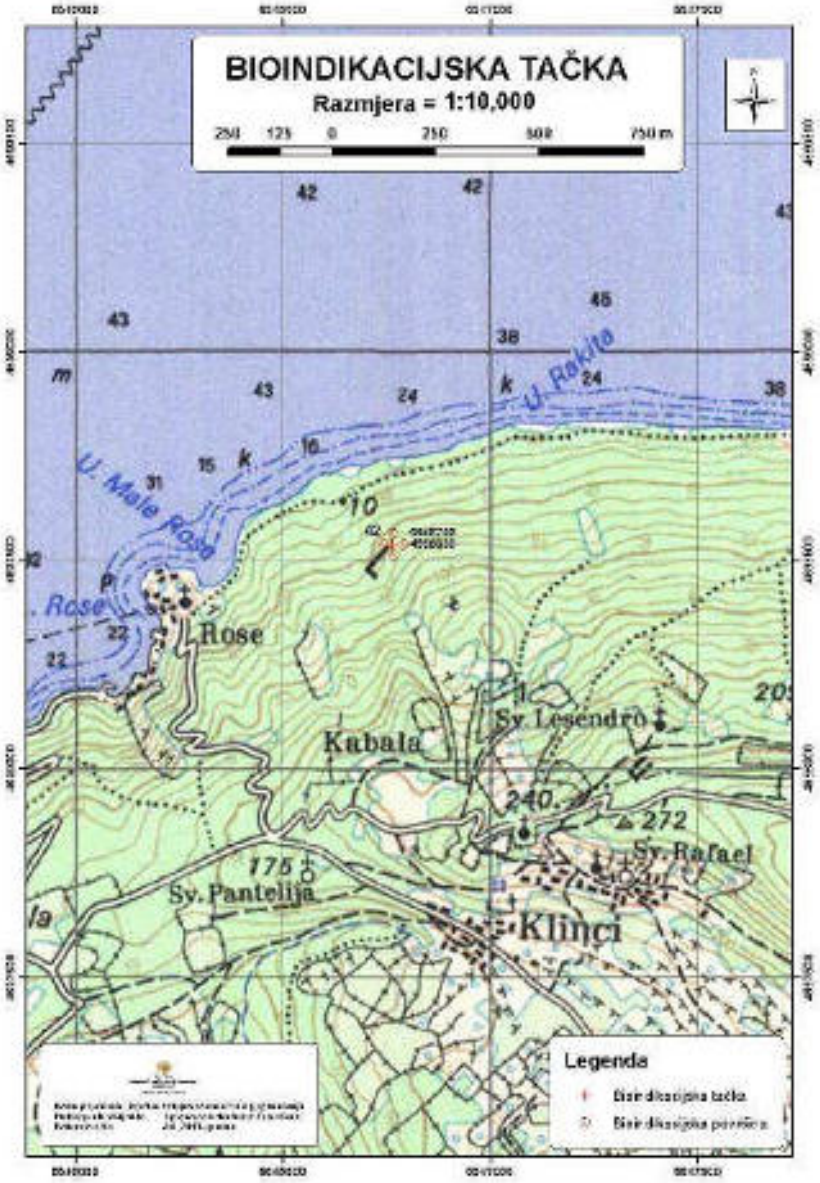


Tačka 40/Point 40.

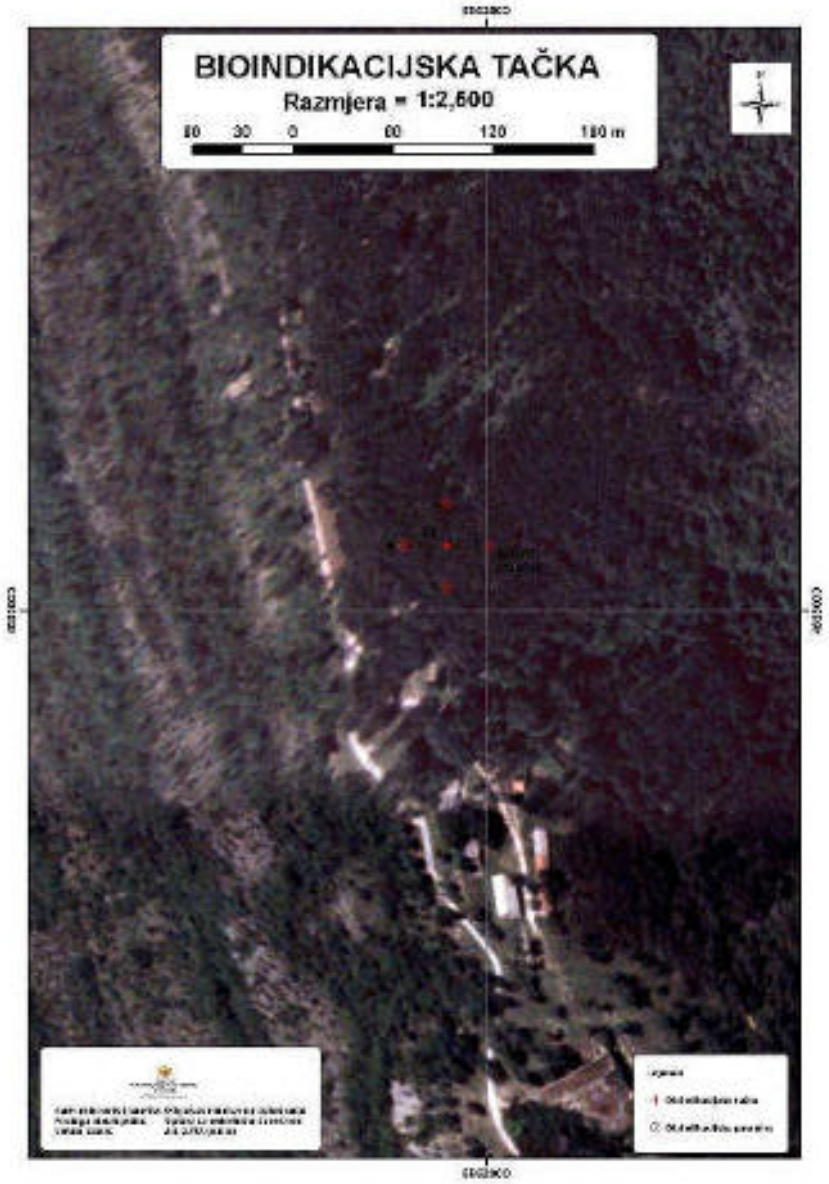
Tačka 41/Point 41.

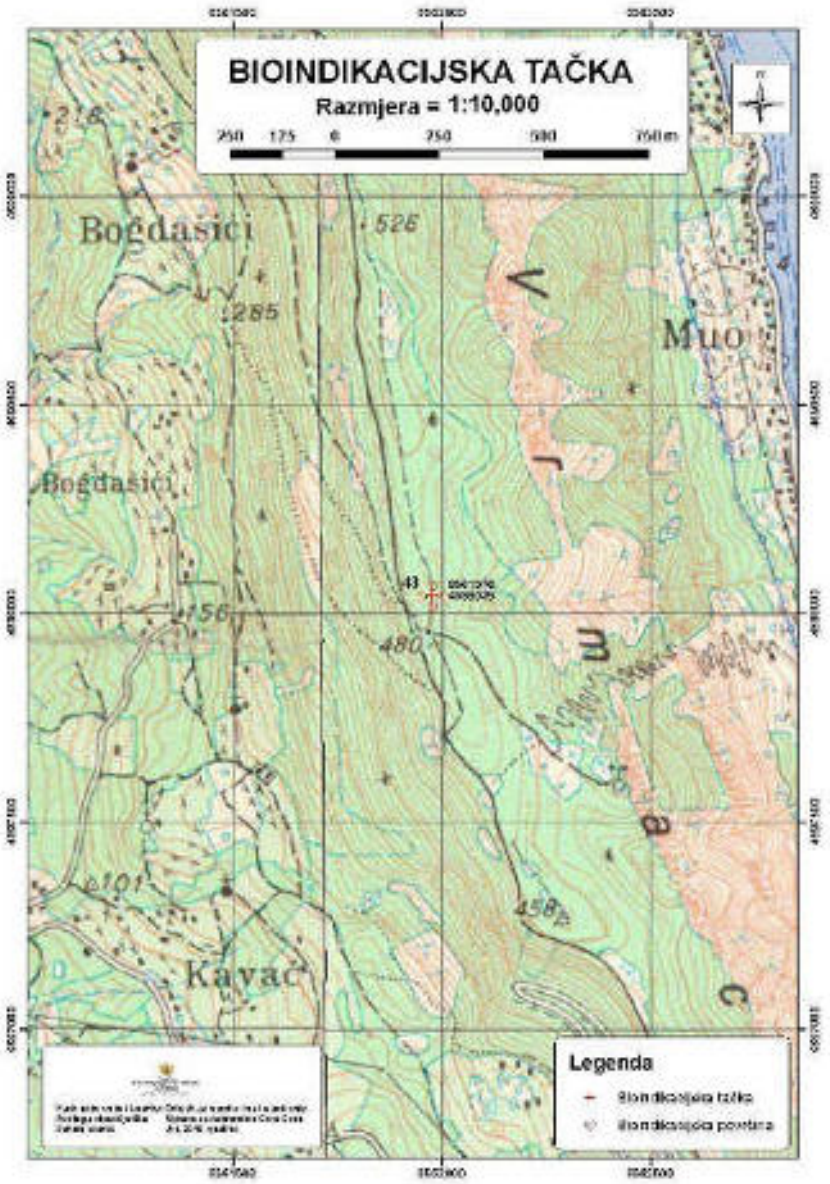


Tačka 42/Point 42.



Tačka 43/Point 43.



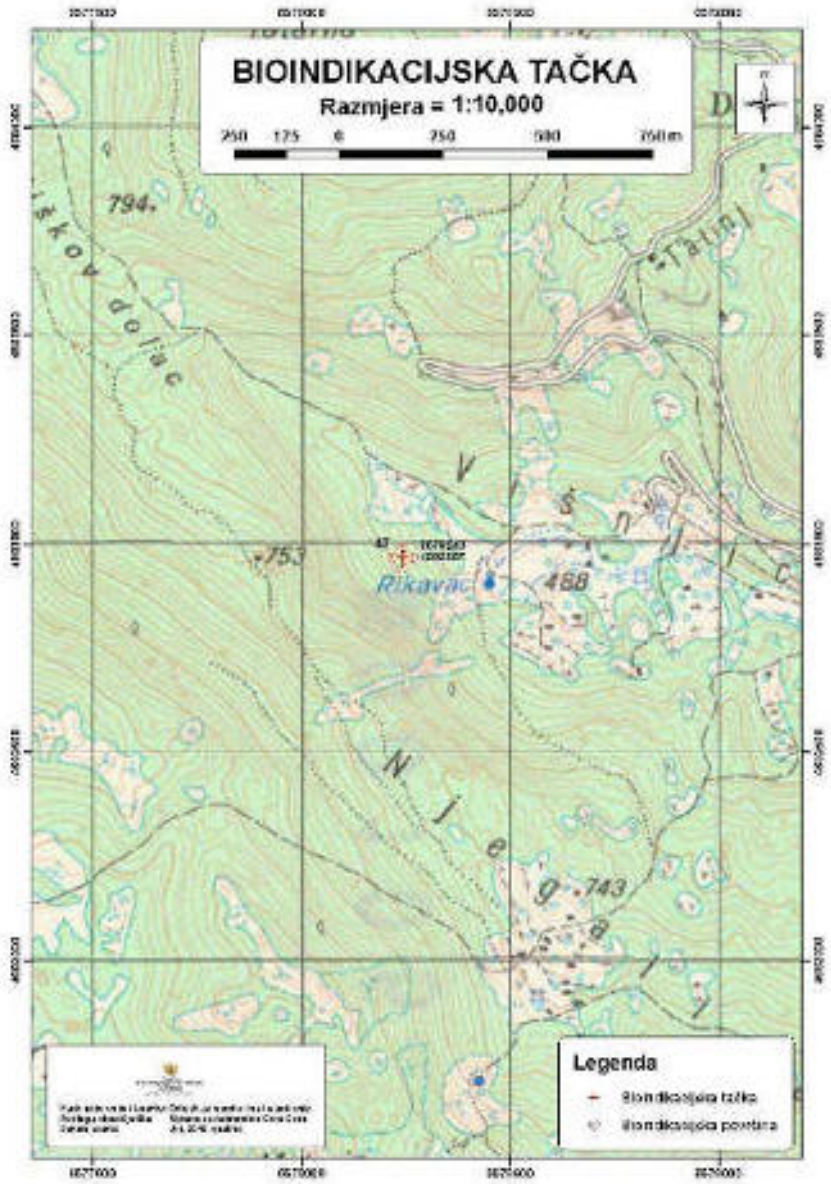


Tačka 44/Point 44.

Tačka 45/Point 45.

Tačka 46/Point 46.

Tačka 47/Point 47.



Tačka 48/Point 48.

Tačka 49/Point 49.

Aneks 3/Anex 3

Izvještaj - formulari 802010PLO, 802010TRE, 802010TRF

Report forms 802010 PLO, 802010 TRE, 802010 TRF

Formular 802010PLO

Broj Tačke /No	Država/ Country code	Broj Tačke/ Observation point	Datum Postavljanja/ Date of observation	Egr / Lattiitude coordinate	H / Longitude coordinate	Dostupnost Vode / Water	Tip Humusa / Humus	Nadm. Visina/ Altittude	Ekspozicija/ Orientation	Srednja Starost Dom Sprata/ Mean age	Komentar/ Comment
1	80	1	15.9.2010	43 26 21	19 09 17	2	1	17	1	2	
2	80	2	13.9.2010	43 17 37	19 09 12	2	1	34	6	7	
3	80	3	14.9.2010	43 17 29	19 21 18	2	1	18	8	3	
4	80	4	6.9.2010	43 09 10	18 45 26	2	3	21	8	2	
5	80	5	7.9.2010	43 09 39	18 56 08	1	3	34	8	2	
6	80	6	10.9.2010	43 09 32	19 07 48	2	1	28	9	4	
7	80	7	14.9.2010	43 08 51	19 20 46	2	1	24	1	8	
8	80	8	11.9.2010	43 08 35	19 32 56	2	1	25	7	4	
9	80	9	10.9.2010	43 08 36	19 44 27	2	1	15	1	8	
10	80	10	14.9.2010	43 00 36	18 33 34	1	2	27	7	2	
11	80	11	14.9.2010	43 00 31	18 45 49	1	2	21	4	2	
12	80	12	3.9.2010	43 00 30	18 57 07	1	2	25	7	4	
13	80	13	3.9.2010	43 00 20	19 08 53	2	2	35	8	4	
14	80	14	16.9.2010	43 00 44	19 22 08	2	2	31	4	3	
15	80	15	22.9.2010	43 00 03	19 32 26	2	2	28	4	3	
16	80	16	9.9.2010	42 59 53	19 44 09	2	1	13	2	2	
17	80	17	15.9.2010	42 59 42	19 55 58	2	1	27	5	1	
18	80	18	15.9.2010	42 51 57	18 33 29	1	2	21	1	2	
19	80	19	15.9.2010	42 51 53	18 45 14	1	2	23	5	2	
20	80	20	16.9.2010	42 51 48	18 56 59	1	2	15	5	2	
21	80	21	16.9.2010	42 51 46	19 06 31	2	2	25	2	3	
22	80	22	16.9.2010	42 51 34	19 20 28	2	2	17	7	3	
23	80	23	21.9.2010	42 51 25	19 32 13	2	2	21	1	3	
24	80	24	14.9.2010	42 51 15	19 43 57	2	1	29	2	8	
25	80	25	12.9.2010	42 51 04	19 55 42	2	1	17	8	1	
26	80	26	7.9.2010	42 50 37	20 07 25	2	2	22	6	4	
27	80	27	18.9.2010	42 50 38	20 19 10	2	2	24	8	4	
28	80	28	15.9.2010	42 43 15	18 45 07	1	2	18	9	2	
29	80	29	14.9.2010	42 43 09	18 56 51	1	2	12	5	2	
30	80	30	14.9.2010	42 43 11	19 09 00	1	2	17	5	2	
31	80	31	15.10.2010	42 42 55	19 20 17	2	2	8	8	3	
32	80	32	7.9.2010	42 42 47	19 32 00	2	2	26	2	5	
33	80	33	14.9.2010	42 42 37	19 43 43	2	2	27	3	5	
34	80	34	13.9.2010	42 42 25	19 55 26	2	1	35	2	8	
35	80	35	13.9.2010	42 34 19	18 33 59	2	2	27	4	2	
36	80	36	11.9.2010	42 33 48	18 42 36	1	2	15	6	2	
37	80	37	16.9.2010	43 34 31	18 56 43	1	2	19	1	3	
38	80	38	14.9.2010	42 35 15	19 05 30	1	2	3	9	2	
39	80	39	10.9.2010	42 34 02	19 20 36	1	2	3	5	2	
40	80	40	13.9.2010	42 34 55	19 29 50	1	2	30	5	4	
41	80	41	13.9.2010	42 33 47	19 55 10	2	2	29	7	3	
42	80	42	10.9.2010	42 25 46	18 33 48	1	2	1	8	3	
43	80	43	9.9.2010	42 25 26	18 44 54	1	2	10	4	3	
44	80	44	17.9.2010	42 25 52	18 56 35	1	2	20	5	2	
45	80	45	8.9.2010	42 25 46	19 08 15	1	2	7	9	2	

Broj Tačke /No	Država/ Country code	Broj Tačke/ Observation point	Datum Postavljanja/ Date of observation	Egr / Lattiitude coordinate	H / Longitude coordinate	Dostupnost Vode / Water	Tip Humusa / Humus	Nadm. Visina/ Altittude	Ekspozicija/ Orientation	Srednja Starost Dom Sprata/ Mean age	Komentar/ Comment
46	80	46	9.9.2010	42 26 23	19 21 36	1	1	4	1	1	
47	80	47	13.9.2010	42 17 13	18 56 38	1	1	11	2	2	
48	80	48	11.9.2010	42 08 31	19 08 00	2	1	7	5	3	
49	80	49	11.9.2010	41 59 49	19 18 21	1	1	3	2	2	

Formular 802010TRE

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00001	0001	15.9.2010	0001	041	010	1	1	0
00002	0001	15.9.2010	0002	041	010	1	1	0
00003	0001	15.9.2010	0003	041	010	0	1	0
00004	0001	15.9.2010	0004	041	010	0	1	0
00005	0001	15.9.2010	0005	048	010	1	1	0
00006	0001	15.9.2010	0006	041	010	0	1	0
00007	0001	15.9.2010	0007	041	010	0	1	0
00008	0001	15.9.2010	0008	013	015	1	1	0
00009	0001	15.9.2010	0009	013	015	1	1	0
00010	0001	15.9.2010	0010	013	010	0	1	0
00011	0001	15.9.2010	0011	013	010	0	1	0
00012	0001	15.9.2010	0012	013	010	0	1	0
00013	0001	15.9.2010	0013	041	010	0	1	0
00014	0001	15.9.2010	0014	041	010	0	1	0
00015	0001	15.9.2010	0015	041	010	1	1	0
00016	0001	15.9.2010	0016	041	010	0	1	0
00017	0001	15.9.2010	0017	041	010	1	1	0
00018	0001	15.9.2010	0018	041	010	1	1	0
00019	0001	15.9.2010	0019	041	015	0	1	0
00020	0001	15.9.2010	0020	041	015	0	1	0
00021	0001	15.9.2010	0021	041	010	0	1	0
00022	0001	15.9.2010	0022	041	010	0	1	0
00023	0001	15.9.2010	0023	041	015	1	1	0
00024	0001	15.9.2010	0024	048	010	0	1	0
00025	0002	13.9.2010	0001	118	025	0	1	0
00026	0002	13.9.2010	0002	118	025	0	1	0
00027	0002	13.9.2010	0003	118	020	0	1	0
00028	0002	13.9.2010	0004	118	030	0	1	0
00029	0002	13.9.2010	0005	118	040	0	1	0
00030	0002	13.9.2010	0006	118	050	1	1	0
00031	0002	13.9.2010	0007	118	010	0	1	0
00032	0002	13.9.2010	0008	118	010	0	1	0
00033	0002	13.9.2010	0009	118	010	0	1	0
00034	0002	13.9.2010	0010	118	025	1	1	0
00035	0002	13.9.2010	0011	118	010	0	1	0
00036	0002	13.9.2010	0012	118	010	0	1	0
00037	0002	13.9.2010	0013	118	010	0	1	0
00038	0002	13.9.2010	0014	118	010	0	1	0
00039	0002	13.9.2010	0015	118	010	0	1	0
00040	0002	13.9.2010	0016	118	010	0	1	0
00041	0002	13.9.2010	0017	118	010	0	1	0
00042	0002	13.9.2010	0018	118	010	0	1	0
00043	0002	13.9.2010	0019	118	025	1	1	0
00044	0002	13.9.2010	0020	118	025	0	1	0
00045	0002	13.9.2010	0021	118	025	1	1	0
00046	0002	13.9.2010	0022	118	010	0	1	0
00047	0002	13.9.2010	0023	118	010	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00048	0002	13.9.2010	0024	118	025	1	1	0
00049	0003	14.9.2010	0001	041	020	0	1	0
00050	0003	14.9.2010	0002	041	035	0	1	0
00051	0003	14.9.2010	0003	041	025	0	1	0
00052	0003	14.9.2010	0004	041	020	0	1	0
00053	0003	14.9.2010	0005	041	020	0	1	0
00054	0003	14.9.2010	0006	041	010	0	1	0
00055	0003	14.9.2010	0007	041	010	0	1	0
00056	0003	14.9.2010	0008	041	010	1	1	0
00057	0003	14.9.2010	0009	041	015	1	1	0
00058	0003	14.9.2010	0010	041	010	1	1	0
00059	0003	14.9.2010	0011	041	010	0	1	0
00060	0003	14.9.2010	0012	041	010	0	1	0
00061	0003	14.9.2010	0013	041	015	1	1	0
00062	0003	14.9.2010	0014	041	015	1	1	0
00063	0003	14.9.2010	0015	041	015	1	1	0
00064	0003	14.9.2010	0016	041	010	1	1	0
00065	0003	14.9.2010	0017	041	015	1	1	0
00066	0003	14.9.2010	0018	041	015	1	1	0
00067	0003	14.9.2010	0019	041	015	1	1	0
00068	0003	14.9.2010	0020	041	015	1	1	0
00069	0003	14.9.2010	0021	041	015	1	1	0
00070	0003	14.9.2010	0022	041	010	0	1	0
00071	0003	14.9.2010	0023	041	010	1	1	0
00072	0003	14.9.2010	0024	041	010	1	1	0
00073	0004	06.09.10	0001	018	020	0	1	0
00074	0004	06.09.10	0002	018	015	0	1	0
00075	0004	06.09.10	0003	018	020	0	1	0
00076	0004	06.09.10	0004	018	030	0	1	0
00077	0004	06.09.10	0005	018	030	0	1	0
00078	0004	06.09.10	0006	018	020	0	1	0
00079	0004	06.09.10	0007	018	035	0	1	0
00080	0004	06.09.10	0008	018	025	0	1	0
00081	0004	06.09.10	0009	018	025	0	1	0
00082	0004	06.09.10	0010	018	015	0	1	0
00083	0004	06.09.10	0011	018	025	0	1	0
00084	0004	06.09.10	0012	018	025	0	1	0
00085	0004	06.09.10	0013	018	025	0	1	0
00086	0004	06.09.10	0014	018	015	0	1	0
00087	0004	06.09.10	0015	018	020	0	1	0
00088	0004	06.09.10	0016	018	020	0	1	0
00089	0004	06.09.10	0017	018	015	0	1	0
00090	0004	06.09.10	0018	018	015	0	1	0
00091	0004	06.09.10	0019	018	020	0	1	0
00092	0004	06.09.10	0020	018	020	0	1	0
00093	0004	06.09.10	0021	018	015	0	1	0
00094	0004	06.09.10	0022	018	015	0	1	0
00095	0004	06.09.10	0023	018	015	0	1	0
00096	0004	06.09.10	0024	018	020	0	1	0
00097	0005	07.09.10	0001	018	020	0	1	0
00098	0005	07.09.10	0002	018	025	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00099	0005	07.09.10	0003	018	025	0	1	0
00100	0005	07.09.10	0004	018	030	0	1	0
00101	0005	07.09.10	0005	018	030	0	1	0
00102	0005	07.09.10	0006	018	025	0	1	0
00103	0005	07.09.10	0007	018	030	0	1	0
00104	0005	07.09.10	0008	018	030	0	1	0
00105	0005	07.09.10	0009	018	035	0	1	0
00106	0005	07.09.10	0010	018	030	0	1	0
00107	0005	07.09.10	0011	018	035	0	1	0
00108	0005	07.09.10	0012	018	025	0	1	0
00109	0005	07.09.10	0013	018	025	0	1	0
00110	0005	07.09.10	0014	018	020	0	1	0
00111	0005	07.09.10	0015	018	025	0	1	0
00112	0005	07.09.10	0016	018	025	0	1	0
00113	0005	07.09.10	0017	018	025	0	1	0
00114	0005	07.09.10	0018	018	020	0	1	0
00115	0005	07.09.10	0019	018	025	0	1	0
00116	0005	07.09.10	0020	018	030	0	1	0
00117	0005	07.09.10	0021	018	020	0	1	0
00118	0005	07.09.10	0022	018	025	0	1	0
00119	0005	07.09.10	0023	018	025	0	1	0
00120	0005	07.09.10	0024	018	025	0	1	0
00121	0006	10.09.10	0001	118	010	0	2	0
00122	0006	10.09.10	0002	118	050	2	1	0
00123	0006	10.09.10	0003	118	015	0	2	0
00124	0006	10.09.10	0004	118	025	2	1	0
00125	0006	10.09.10	0005	118	015	0	2	0
00126	0006	10.09.10	0006	118	015	0	2	0
00127	0006	10.09.10	0007	118	015	0	1	0
00128	0006	10.09.10	0008	118	005	0	1	0
00129	0006	10.09.10	0009	118	005	0	1	0
00130	0006	10.09.10	0010	118	000	0	1	0
00131	0006	10.09.10	0011	118	000	0	1	0
00132	0006	10.09.10	0012	118	005	0	1	0
00133	0006	10.09.10	0013	118	010	0	1	0
00134	0006	10.09.10	0014	118	045	0	1	0
00135	0006	10.09.10	0015	118	000	0	1	0
00136	0006	10.09.10	0016	118	035	0	1	0
00137	0006	10.09.10	0017	118	035	0	3	0
00138	0006	10.09.10	0018	118	040	0	2	0
00139	0006	10.09.10	0019	118	025	0	2	0
00140	0006	10.09.10	0020	118	025	0	1	0
00141	0006	10.09.10	0021	118	030	0	1	0
00142	0006	10.09.10	0022	118	020	0	1	0
00143	0006	10.09.10	0023	118	020	0	1	0
00144	0006	10.09.10	0024	118	020	0	1	0
00145	0007	14.09.10	0001	100	010	0	2	0
00146	0007	14.09.10	0002	100	010	0	2	0
00147	0007	14.09.10	0003	100	010	1	2	0
00148	0007	14.09.10	0004	118	010	0	1	0
00149	0007	14.09.10	0005	100	010	0	2	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00150	0007	14.09.10	0006	118	010	0	1	0
00151	0007	14.09.10	0007	118	010	0	1	0
00152	0007	14.09.10	0008	100	015	1	1	0
00153	0007	14.09.10	0009	100	010	0	1	0
00154	0007	14.09.10	0010	118	010	0	1	0
00155	0007	14.09.10	0011	100	010	0	1	0
00156	0007	14.09.10	0012	100	010	0	1	0
00157	0007	14.09.10	0013	100	010	0	2	0
00158	0007	14.09.10	0014	100	010	0	1	0
00159	0007	14.09.10	0015	100	010	0	1	0
00160	0007	14.09.10	0016	100	015	0	2	0
00161	0007	14.09.10	0017	100	010	0	2	0
00162	0007	14.09.10	0018	100	010	0	1	0
00163	0007	14.09.10	0019	100	025	1	2	0
00164	0007	14.09.10	0020	100	015	0	2	0
00165	0007	14.09.10	0021	100	010	0	2	0
00166	0007	14.09.10	0022	100	015	0	2	0
00167	0007	14.09.10	0023	100	015	0	2	0
00168	0007	14.09.10	0024	100	010	0	2	0
00169	0008	11.09.10	0001	100	030	1	2	0
00170	0008	11.09.10	0002	118	040	2	1	0
00171	0008	11.09.10	0003	118	030	0	1	0
00172	0008	11.09.10	0004	118	035	1	1	0
00173	0008	11.09.10	0005	100	030	1	1	0
00174	0008	11.09.10	0006	118	025	0	1	0
00175	0008	11.09.10	0007	100	010	0	3	0
00176	0008	11.09.10	0008	100	015	0	3	0
00177	0008	11.09.10	0009	100	025	0	3	0
00178	0008	11.09.10	0010	100	025	0	3	0
00179	0008	11.09.10	0011	100	015	0	3	0
00180	0008	11.09.10	0012	118	025	0	1	0
00181	0008	11.09.10	0013	100	020	0	3	0
00182	0008	11.09.10	0014	100	030	1	2	0
00183	0008	11.09.10	0015	100	015	0	3	0
00184	0008	11.09.10	0016	010	015	1	1	0
00185	0008	11.09.10	0017	118	020	0	1	0
00186	0008	11.09.10	0018	100	045	1	1	0
00187	0008	11.09.10	0019	004	050	0	1	0
00188	0008	11.09.10	0020	100	015	0	2	0
00189	0008	11.09.10	0021	100	020	0	2	0
00190	0008	11.09.10	0022	100	060	0	1	0
00191	0008	11.09.10	0023	035	080	1	1	0
00192	0008	11.09.10	0024	100	015	0	2	0
00193	0009	10.09.10	0001	013	010	0	1	0
00194	0009	10.09.10	0002	013	010	2	1	0
00195	0009	10.09.10	0003	013	015	2	1	0
00196	0009	10.09.10	0004	013	030	0	1	0
00197	0009	10.09.10	0005	013	015	1	1	0
00198	0009	10.09.10	0006	013	010	2	1	0
00199	0009	10.09.10	0007	013	020	2	1	0
00200	0009	10.09.10	0008	013	025	2	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00201	0009	10.09.10	0009	013	015	2	1	0
00202	0009	10.09.10	0010	013	025	1	1	0
00203	0009	10.09.10	0011	013	015	2	1	0
00204	0009	10.09.10	0012	013	025	0	1	0
00205	0009	10.09.10	0013	013	030	1	2	0
00206	0009	10.09.10	0014	013	035	1	1	0
00207	0009	10.09.10	0015	013	035	1	2	0
00208	0009	10.09.10	0016	013	045	1	1	0
00209	0009	10.09.10	0017	013	035	1	1	0
00210	0009	10.09.10	0018	013	035	1	1	0
00211	0009	10.09.10	0019	013	035	1	2	0
00212	0009	10.09.10	0020	013	020	0	1	0
00213	0009	10.09.10	0021	013	030	1	1	0
00214	0009	10.09.10	0022	013	040	1	1	0
00215	0009	10.09.10	0023	013	040	1	1	0
00216	0009	10.09.10	0024	013	005	0	1	0
00217	0010	14.09.10	0001	041	050	0	1	0
00218	0010	14.09.10	0002	023	035	0	1	0
00219	0010	14.09.10	0003	023	030	0	1	0
00220	0010	14.09.10	0004	023	020	0	1	0
00221	0010	14.09.10	0005	023	025	0	1	0
00222	0010	14.09.10	0006	041	035	0	1	0
00223	0010	14.09.10	0007	041	035	0	1	0
00224	0010	14.09.10	0008	041	040	0	1	0
00225	0010	14.09.10	0009	029	060	0	1	0
00226	0010	14.09.10	0010	048	015	0	1	0
00227	0010	14.09.10	0011	048	020	0	1	0
00228	0010	14.09.10	0012	048	030	0	1	0
00229	0010	14.09.10	0013	023	035	0	1	0
00230	0010	14.09.10	0014	023	035	0	1	0
00231	0010	14.09.10	0015	029	030	0	1	0
00232	0010	14.09.10	0016	023	015	0	1	0
00233	0010	14.09.10	0017	029	025	0	1	0
00234	0010	14.09.10	0018	029	025	0	1	0
00235	0010	14.09.10	0019	041	035	0	1	0
00236	0010	14.09.10	0020	041	040	0	1	0
00237	0010	14.09.10	0021	041	040	0	1	0
00238	0010	14.09.10	0022	013	015	0	2	0
00239	0010	14.09.10	0023	044	020	0	1	0
00240	0010	14.09.10	0024	023	040	0	1	0
00241	0011	14.09.10	0001	018	010	0	1	0
00242	0011	14.09.10	0002	018	010	0	1	0
00243	0011	14.09.10	0003	018	020	0	1	0
00244	0011	14.09.10	0004	018	015	0	1	0
00245	0011	14.09.10	0005	018	015	0	1	0
00246	0011	14.09.10	0006	018	015	0	1	0
00247	0011	14.09.10	0007	018	020	0	1	0
00248	0011	14.09.10	0008	018	020	0	1	0
00249	0011	14.09.10	0009	018	020	0	1	0
00250	0011	14.09.10	0010	018	020	0	1	0
00251	0011	14.09.10	0011	129	020	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00252	0011	14.09.10	0012	041	010	0	1	0
00253	0011	14.09.10	0013	018	020	0	1	0
00254	0011	14.09.10	0014	013	015	0	1	0
00255	0011	14.09.10	0015	018	040	0	1	0
00256	0011	14.09.10	0016	041	030	0	1	0
00257	0011	14.09.10	0017	041	015	0	1	0
00258	0011	14.09.10	0018	041	015	0	1	0
00259	0011	14.09.10	0019	018	030	0	1	0
00260	0011	14.09.10	0020	018	025	0	1	0
00261	0011	14.09.10	0021	018	025	0	1	0
00262	0011	14.09.10	0022	018	035	0	1	0
00263	0011	14.09.10	0023	018	020	0	1	0
00264	0011	14.09.10	0024	018	020	0	1	0
00265	0012	03.09.10	0001	048	040	0	1	0
00266	0012	03.09.10	0002	048	035	0	1	0
00267	0012	03.09.10	0003	048	035	0	1	0
00268	0012	03.09.10	0004	048	030	0	1	0
00269	0012	03.09.10	0005	048	035	0	1	0
00270	0012	03.09.10	0006	048	035	0	1	0
00271	0012	03.09.10	0007	023	040	0	1	0
00272	0012	03.09.10	0008	023	035	0	1	0
00273	0012	03.09.10	0009	041	030	0	1	0
00274	0012	03.09.10	0010	041	035	0	1	0
00275	0012	03.09.10	0011	041	035	0	1	0
00276	0012	03.09.10	0012	041	030	0	1	0
00277	0012	03.09.10	0013	023	035	0	1	0
00278	0012	03.09.10	0014	029	030	0	1	0
00279	0012	03.09.10	0015	023	030	0	1	0
00280	0012	03.09.10	0016	041	035	0	2	0
00281	0012	03.09.10	0017	041	035	0	1	0
00282	0012	03.09.10	0018	041	030	0	1	0
00283	0012	03.09.10	0019	048	040	0	1	0
00284	0012	03.09.10	0020	005	030	0	1	0
00285	0012	03.09.10	0021	048	040	0	1	0
00286	0012	03.09.10	0022	048	040	0	1	0
00287	0012	03.09.10	0023	048	040	0	1	0
00288	0012	03.09.10	0024	048	040	0	1	0
00289	0013	03.09.10	0001	018	025	0	1	0
00290	0013	03.09.10	0002	018	030	0	1	0
00291	0013	03.09.10	0003	018	030	0	1	0
00292	0013	03.09.10	0004	018	025	0	1	0
00293	0013	03.09.10	0005	118	015	0	1	0
00294	0013	03.09.10	0006	118	010	0	1	0
00295	0013	03.09.10	0007	005	040	0	1	0
00296	0013	03.09.10	0008	018	035	0	1	0
00297	0013	03.09.10	0009	018	025	0	1	0
00298	0013	03.09.10	0010	018	030	0	1	0
00299	0013	03.09.10	0011	005	040	0	1	0
00300	0013	03.09.10	0012	018	030	0	1	0
00301	0013	03.09.10	0013	018	035	0	1	0
00302	0013	03.09.10	0014	018	035	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00303	0013	03.09.10	0015	018	040	0	1	0
00304	0013	03.09.10	0016	018	025	0	1	0
00305	0013	03.09.10	0017	018	030	0	1	0
00306	0013	03.09.10	0018	018	040	0	1	0
00307	0013	03.09.10	0019	118	010	0	1	0
00308	0013	03.09.10	0020	118	015	0	1	0
00309	0013	03.09.10	0021	118	010	0	1	0
00310	0013	03.09.10	0022	118	010	0	1	0
00311	0013	03.09.10	0023	118	010	0	1	0
00312	0013	03.09.10	0024	118	010	0	1	0
00313	0014	16.09.10	0001	126	045	0	2	0
00314	0014	16.09.10	0002	118	020	0	1	0
00315	0014	16.09.10	0003	118	020	0	1	0
00316	0014	16.09.10	0004	118	010	0	1	0
00317	0014	16.09.10	0005	118	020	0	1	0
00318	0014	16.09.10	0006	118	020	0	1	0
00319	0014	16.09.10	0007	118	000	0	1	0
00320	0014	16.09.10	0008	118	000	0	1	0
00321	0014	16.09.10	0009	118	000	0	1	0
00322	0014	16.09.10	0010	126	030	0	1	0
00323	0014	16.09.10	0011	100	020	0	1	0
00324	0014	16.09.10	0012	126	020	0	1	0
00325	0014	16.09.10	0013	126	030	1	1	0
00326	0014	16.09.10	0014	118	020	0	2	0
00327	0014	16.09.10	0015	118	010	0	1	0
00328	0014	16.09.10	0016	100	000	0	2	0
00329	0014	16.09.10	0017	100	000	0	2	0
00330	0014	16.09.10	0018	100	000	0	2	0
00331	0014	16.09.10	0019	100	030	0	2	0
00332	0014	16.09.10	0020	100	030	0	2	0
00333	0014	16.09.10	0021	100	020	0	1	0
00334	0014	16.09.10	0022	100	020	1	1	0
00335	0014	16.09.10	0023	100	035	0	1	0
00336	0014	16.09.10	0024	126	020	0	1	0
00337	0015	22.09.10	0001	018	020	1	1	0
00338	0015	22.09.10	0002	018	050	2	1	0
00339	0015	22.09.10	0003	018	060	2	1	0
00340	0015	22.09.10	0004	018	060	2	1	0
00341	0015	22.09.10	0005	018	040	1	1	0
00342	0015	22.09.10	0006	018	040	1	1	0
00343	0015	22.09.10	0007	018	060	2	1	0
00344	0015	22.09.10	0008	018	040	2	1	0
00345	0015	22.09.10	0009	018	030	1	1	0
00346	0015	22.09.10	0010	018	010	0	1	0
00347	0015	22.09.10	0011	018	020	2	1	0
00348	0015	22.09.10	0012	018	020	2	1	0
00349	0015	22.09.10	0013	018	050	2	1	0
00350	0015	22.09.10	0014	018	030	2	1	0
00351	0015	22.09.10	0015	018	050	2	1	0
00352	0015	22.09.10	0016	018	050	2	1	0
00353	0015	22.09.10	0017	018	045	2	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00354	0015	22.09.10	0018	018	040	2	1	0
00355	0015	22.09.10	0019	018	020	0	1	0
00356	0015	22.09.10	0020	018	040	0	1	0
00357	0015	22.09.10	0021	018	050	1	1	0
00358	0015	22.09.10	0022	018	020	0	1	0
00359	0015	22.09.10	0023	018	050	2	1	0
00360	0015	22.09.10	0024	018	020	2	1	0
00361	0016	09.09.10	0001	035	005	0	2	0
00362	0016	09.09.10	0002	018	010	0	1	0
00363	0016	09.09.10	0003	041	020	0	1	0
00364	0016	09.09.10	0004	048	015	0	1	0
00365	0016	09.09.10	0005	013	005	0	1	0
00366	0016	09.09.10	0006	018	015	0	1	0
00367	0016	09.09.10	0007	013	025	0	1	0
00368	0016	09.09.10	0008	013	020	0	1	0
00369	0016	09.09.10	0009	013	025	0	1	0
00370	0016	09.09.10	0010	048	020	0	1	0
00371	0016	09.09.10	0011	013	015	0	1	0
00372	0016	09.09.10	0012	013	015	0	1	0
00373	0016	09.09.10	0013	013	015	1	1	0
00374	0016	09.09.10	0014	013	025	0	1	0
00375	0016	09.09.10	0015	048	015	0	1	0
00376	0016	09.09.10	0016	013	015	0	1	0
00377	0016	09.09.10	0017	013	025	0	1	0
00378	0016	09.09.10	0018	013	010	0	1	0
00379	0016	09.09.10	0019	013	010	0	1	0
00380	0016	09.09.10	0020	013	015	0	1	0
00381	0016	09.09.10	0021	013	020	0	1	0
00382	0016	09.09.10	0022	013	020	0	1	0
00383	0016	09.09.10	0023	013	025	0	1	0
00384	0016	09.09.10	0024	013	010	0	1	0
00385	0017	15.09.10	0001	018	010	0	1	0
00386	0017	15.09.10	0002	018	015	0	1	0
00387	0017	15.09.10	0003	018	010	0	1	0
00388	0017	15.09.10	0004	018	005	0	1	0
00389	0017	15.09.10	0005	018	010	0	1	0
00390	0017	15.09.10	0006	018	010	0	1	0
00391	0017	15.09.10	0007	018	015	0	1	0
00392	0017	15.09.10	0008	018	000	0	1	0
00393	0017	15.09.10	0009	018	010	0	1	0
00394	0017	15.09.10	0010	018	005	0	1	0
00395	0017	15.09.10	0011	018	005	0	1	0
00396	0017	15.09.10	0012	018	005	0	1	0
00397	0017	15.09.10	0013	018	005	0	1	0
00398	0017	15.09.10	0014	018	005	0	1	0
00399	0017	15.09.10	0015	018	005	0	1	0
00400	0017	15.09.10	0016	018	005	0	1	0
00401	0017	15.09.10	0017	018	005	0	1	0
00402	0017	15.09.10	0018	018	005	0	1	0
00403	0017	15.09.10	0019	018	005	0	1	0
00404	0017	15.09.10	0020	018	005	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00405	0017	15.09.10	0021	018	005	0	1	0
00406	0017	15.09.10	0022	018	005	0	1	0
00407	0017	15.09.10	0023	018	005	0	1	0
00408	0017	15.09.10	0024	018	005	0	1	0
00409	0018	15.09.10	0001	013	020	0	1	0
00410	0018	15.09.10	0002	013	020	0	1	0
00411	0018	15.09.10	0003	013	030	0	1	0
00412	0018	15.09.10	0004	013	020	0	1	0
00413	0018	15.09.10	0005	023	020	0	1	0
00414	0018	15.09.10	0006	013	020	0	1	0
00415	0018	15.09.10	0007	013	025	0	1	0
00416	0018	15.09.10	0008	013	030	0	1	0
00417	0018	15.09.10	0009	013	030	0	1	0
00418	0018	15.09.10	0010	013	025	0	1	0
00419	0018	15.09.10	0011	013	030	0	1	0
00420	0018	15.09.10	0012	013	030	0	1	0
00421	0018	15.09.10	0013	048	030	0	1	0
00422	0018	15.09.10	0014	013	025	0	1	0
00423	0018	15.09.10	0015	013	025	0	1	0
00424	0018	15.09.10	0016	041	030	0	1	0
00425	0018	15.09.10	0017	013	030	0	1	0
00426	0018	15.09.10	0018	013	025	0	1	0
00427	0018	15.09.10	0019	013	030	0	1	0
00428	0018	15.09.10	0020	023	030	0	1	0
00429	0018	15.09.10	0021	013	030	0	1	0
00430	0018	15.09.10	0022	041	025	0	1	0
00431	0018	15.09.10	0023	041	030	0	1	0
00432	0018	15.09.10	0024	041	015	0	1	0
00433	0019	15.09.10	0001	041	005	0	1	0
00434	0019	15.09.10	0002	029	005	0	1	0
00435	0019	15.09.10	0003	002	005	0	1	0
00436	0019	15.09.10	0004	023	005	0	2	0
00437	0019	15.09.10	0005	029	005	0	1	0
00438	0019	15.09.10	0006	029	005	0	1	0
00439	0019	15.09.10	0007	129	005	0	1	0
00440	0019	15.09.10	0008	023	005	0	2	0
00441	0019	15.09.10	0009	041	005	0	1	0
00442	0019	15.09.10	0010	023	005	0	2	0
00443	0019	15.09.10	0011	023	005	0	2	0
00444	0019	15.09.10	0012	023	005	0	2	0
00445	0019	15.09.10	0013	029	005	0	1	0
00446	0019	15.09.10	0014	029	005	0	1	0
00447	0019	15.09.10	0015	002	005	0	1	0
00448	0019	15.09.10	0016	023	005	0	2	0
00449	0019	15.09.10	0017	023	005	0	2	0
00450	0019	15.09.10	0018	041	005	0	1	0
00451	0019	15.09.10	0019	029	005	0	1	0
00452	0019	15.09.10	0020	029	005	0	1	0
00453	0019	15.09.10	0021	023	005	0	2	0
00454	0019	15.09.10	0022	023	005	0	2	0
00455	0019	15.09.10	0023	129	005	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00456	0019	15.09.10	0024	129	005	0	1	0
00457	0020	16.09.10	0001	002	025	0	1	0
00458	0020	16.09.10	0002	002	025	0	1	0
00459	0020	16.09.10	0003	023	035	0	2	0
00460	0020	16.09.10	0004	023	040	0	1	0
00461	0020	16.09.10	0005	023	040	0	1	0
00462	0020	16.09.10	0006	023	020	0	1	0
00463	0020	16.09.10	0007	023	030	0	1	0
00464	0020	16.09.10	0008	023	025	0	1	0
00465	0020	16.09.10	0009	023	030	0	1	0
00466	0020	16.09.10	0010	023	030	0	1	0
00467	0020	16.09.10	0011	048	030	0	1	0
00468	0020	16.09.10	0012	048	025	0	1	0
00469	0020	16.09.10	0013	048	035	0	1	0
00470	0020	16.09.10	0014	048	030	0	1	0
00471	0020	16.09.10	0015	048	025	0	1	0
00472	0020	16.09.10	0016	048	045	0	1	0
00473	0020	16.09.10	0017	048	045	0	1	0
00474	0020	16.09.10	0018	023	025	0	1	0
00475	0020	16.09.10	0019	002	015	0	1	0
00476	0020	16.09.10	0020	002	015	0	1	0
00477	0020	16.09.10	0021	002	035	0	1	0
00478	0020	16.09.10	0022	002	030	0	1	0
00479	0020	16.09.10	0023	002	025	0	1	0
00480	0020	16.09.10	0024	023	040	0	1	0
00481	0021	16.09.10	0001	018	020	0	1	0
00482	0021	16.09.10	0002	018	015	0	1	0
00483	0021	16.09.10	0003	018	030	0	1	0
00484	0021	16.09.10	0004	018	010	0	1	0
00485	0021	16.09.10	0005	018	020	0	1	0
00486	0021	16.09.10	0006	018	015	0	1	0
00487	0021	16.09.10	0007	018	010	0	1	0
00488	0021	16.09.10	0008	018	020	0	1	0
00489	0021	16.09.10	0009	018	015	0	1	0
00490	0021	16.09.10	0010	018	015	0	1	0
00491	0021	16.09.10	0011	018	020	0	1	0
00492	0021	16.09.10	0012	018	010	0	1	0
00493	0021	16.09.10	0013	018	010	0	1	0
00494	0021	16.09.10	0014	018	015	0	1	0
00495	0021	16.09.10	0015	018	020	0	1	0
00496	0021	16.09.10	0016	018	010	0	1	0
00497	0021	16.09.10	0017	018	010	0	1	0
00498	0021	16.09.10	0018	018	015	0	1	0
00499	0021	16.09.10	0019	018	010	0	1	0
00500	0021	16.09.10	0020	018	015	0	1	0
00501	0021	16.09.10	0021	018	010	0	1	0
00502	0021	16.09.10	0022	018	010	0	1	0
00503	0021	16.09.10	0023	018	020	0	1	0
00504	0021	16.09.10	0024	018	010	0	1	0
00505	0022	16.09.10	0001	048	010	0	1	0
00506	0022	16.09.10	0002	048	010	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00507	0022	16.09.10	0003	048	010	0	1	0
00508	0022	16.09.10	0004	029	015	0	1	0
00509	0022	16.09.10	0005	029	010	0	1	0
00510	0022	16.09.10	0006	029	020	0	1	0
00511	0022	16.09.10	0007	048	020	0	1	0
00512	0022	16.09.10	0008	036	030	1	1	0
00513	0022	16.09.10	0009	036	015	1	1	0
00514	0022	16.09.10	0010	029	000	0	1	0
00515	0022	16.09.10	0011	048	020	1	1	0
00516	0022	16.09.10	0012	048	030	1	1	0
00517	0022	16.09.10	0013	029	045	2	1	0
00518	0022	16.09.10	0014	048	020	1	1	0
00519	0022	16.09.10	0015	048	020	1	1	0
00520	0022	16.09.10	0016	048	010	0	1	0
00521	0022	16.09.10	0017	048	020	1	1	0
00522	0022	16.09.10	0018	048	015	1	1	0
00523	0022	16.09.10	0019	004	010	0	1	0
00524	0022	16.09.10	0020	048	010	0	1	0
00525	0022	16.09.10	0021	048	015	1	1	0
00526	0022	16.09.10	0022	048	015	0	1	0
00527	0022	16.09.10	0023	048	010	0	1	0
00528	0022	16.09.10	0024	048	020	0	1	0
00529	0023	21.09.10	0001	018	015	0	1	0
00530	0023	21.09.10	0002	018	030	0	1	0
00531	0023	21.09.10	0003	018	015	1	1	0
00532	0023	21.09.10	0004	018	025	0	1	0
00533	0023	21.09.10	0005	018	020	0	1	0
00534	0023	21.09.10	0006	018	025	0	1	0
00535	0023	21.09.10	0007	018	040	0	1	0
00536	0023	21.09.10	0008	018	025	0	1	0
00537	0023	21.09.10	0009	018	015	0	1	0
00538	0023	21.09.10	0010	018	015	0	1	0
00539	0023	21.09.10	0011	018	010	0	1	0
00540	0023	21.09.10	0012	018	030	0	1	0
00541	0023	21.09.10	0013	018	000	0	1	0
00542	0023	21.09.10	0014	018	005	0	1	0
00543	0023	21.09.10	0015	018	015	0	1	0
00544	0023	21.09.10	0016	018	020	0	1	0
00545	0023	21.09.10	0017	018	020	0	1	0
00546	0023	21.09.10	0018	018	015	0	1	0
00547	0023	21.09.10	0019	018	025	0	1	0
00548	0023	21.09.10	0020	018	005	0	1	0
00549	0023	21.09.10	0021	018	010	0	1	0
00550	0023	21.09.10	0022	018	030	0	1	0
00551	0023	21.09.10	0023	018	005	0	1	0
00552	0023	21.09.10	0024	018	025	0	1	0
00553	0024	14.09.10	0001	100	030	1	2	0
00554	0024	14.09.10	0002	018	020	1	1	0
00555	0024	14.09.10	0003	018	025	1	1	0
00556	0024	14.09.10	0004	018	020	0	1	0
00557	0024	14.09.10	0005	018	020	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00558	0024	14.09.10	0006	018	030	1	1	0
00559	0024	14.09.10	0007	029	045	1	1	0
00560	0024	14.09.10	0008	018	050	1	1	0
00561	0024	14.09.10	0009	018	055	2	1	0
00562	0024	14.09.10	0010	018	040	1	1	0
00563	0024	14.09.10	0011	018	035	0	1	0
00564	0024	14.09.10	0012	018	050	1	1	0
00565	0024	14.09.10	0013	018	045	1	1	0
00566	0024	14.09.10	0014	018	040	1	1	0
00567	0024	14.09.10	0015	018	040	1	1	0
00568	0024	14.09.10	0016	018	035	0	1	0
00569	0024	14.09.10	0017	018	045	1	1	0
00570	0024	14.09.10	0018	018	040	0	1	0
00571	0024	14.09.10	0019	018	050	1	1	0
00572	0024	14.09.10	0020	018	060	2	1	0
00573	0024	14.09.10	0021	029	030	0	1	0
00574	0024	14.09.10	0022	018	065	1	1	0
00575	0024	14.09.10	0023	018	070	1	1	0
00576	0024	14.09.10	0024	018	075	2	1	0
00577	0025	12.09.10	0001	041	010	0	1	0
00578	0025	12.09.10	0002	041	005	0	1	0
00579	0025	12.09.10	0003	041	005	0	1	0
00580	0025	12.09.10	0004	041	010	0	1	0
00581	0025	12.09.10	0005	041	020	0	1	0
00582	0025	12.09.10	0006	048	015	0	1	0
00583	0025	12.09.10	0007	041	020	0	1	0
00584	0025	12.09.10	0008	041	025	0	1	0
00585	0025	12.09.10	0009	041	010	0	1	0
00586	0025	12.09.10	0010	048	015	0	1	0
00587	0025	12.09.10	0011	048	025	0	1	0
00588	0025	12.09.10	0012	048	020	0	1	0
00589	0025	12.09.10	0013	041	020	0	1	0
00590	0025	12.09.10	0014	041	015	0	1	0
00591	0025	12.09.10	0015	041	025	0	1	0
00592	0025	12.09.10	0016	041	010	0	1	0
00593	0025	12.09.10	0017	041	025	0	1	0
00594	0025	12.09.10	0018	048	020	0	1	0
00595	0025	12.09.10	0019	041	020	0	1	0
00596	0025	12.09.10	0020	041	025	0	1	0
00597	0025	12.09.10	0021	041	025	0	1	0
00598	0025	12.09.10	0022	041	015	0	1	0
00599	0025	12.09.10	0023	048	015	0	1	0
00600	0025	12.09.10	0024	041	015	0	1	0
00601	0026	07.09.10	0001	118	010	0	1	0
00602	0026	07.09.10	0002	118	010	0	1	0
00603	0026	07.09.10	0003	118	015	0	1	0
00604	0026	07.09.10	0004	118	010	0	1	0
00605	0026	07.09.10	0005	118	010	0	1	0
00606	0026	07.09.10	0006	118	010	0	1	0
00607	0026	07.09.10	0007	118	030	0	1	0
00608	0026	07.09.10	0008	118	020	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00609	0026	07.09.10	0009	118	025	0	1	0
00610	0026	07.09.10	0010	118	020	0	1	0
00611	0026	07.09.10	0011	118	025	0	1	0
00612	0026	07.09.10	0012	118	025	0	1	0
00613	0026	07.09.10	0013	118	015	0	1	0
00614	0026	07.09.10	0014	118	015	0	1	0
00615	0026	07.09.10	0015	118	015	1	1	0
00616	0026	07.09.10	0016	118	020	0	1	0
00617	0026	07.09.10	0017	118	025	0	1	0
00618	0026	07.09.10	0018	118	025	0	1	0
00619	0026	07.09.10	0019	118	025	0	1	0
00620	0026	07.09.10	0020	118	035	0	1	0
00621	0026	07.09.10	0021	118	020	0	1	0
00622	0026	07.09.10	0022	118	020	0	1	0
00623	0026	07.09.10	0023	118	015	0	1	0
00624	0026	07.09.10	0024	118	025	0	1	0
00625	0027	18.09.10	0001	118	010	0	1	0
00626	0027	18.09.10	0002	100	010	0	1	0
00627	0027	18.09.10	0003	100	040	2	1	0
00628	0027	18.09.10	0004	100	025	1	1	0
00629	0027	18.09.10	0005	100	015	1	1	0
00630	0027	18.09.10	0006	100	010	0	1	0
00631	0027	18.09.10	0007	100	025	0	1	0
00632	0027	18.09.10	0008	100	015	0	1	0
00633	0027	18.09.10	0009	100	010	0	1	0
00634	0027	18.09.10	0010	100	015	0	1	0
00635	0027	18.09.10	0011	100	040	0	1	0
00636	0027	18.09.10	0012	100	010	0	1	0
00637	0027	18.09.10	0013	100	010	0	1	0
00638	0027	18.09.10	0014	100	005	0	1	0
00639	0027	18.09.10	0015	100	005	0	1	0
00640	0027	18.09.10	0016	100	010	0	1	0
00641	0027	18.09.10	0017	100	005	0	1	0
00642	0027	18.09.10	0018	100	005	0	1	0
00643	0027	18.09.10	0019	100	010	1	2	0
00644	0027	18.09.10	0020	100	025	1	1	0
00645	0027	18.09.10	0021	100	010	0	1	0
00646	0027	18.09.10	0022	100	010	0	1	0
00647	0027	18.09.10	0023	100	030	0	1	0
00648	0027	18.09.10	0024	100	010	0	1	0
00649	0028	15.09.10	0001	029	025	0	1	0
00650	0028	15.09.10	0002	029	030	0	1	0
00651	0028	15.09.10	0003	029	030	0	1	0
00652	0028	15.09.10	0004	014	020	1	1	0
00653	0028	15.09.10	0005	023	020	0	1	0
00654	0028	15.09.10	0006	023	025	0	1	0
00655	0028	15.09.10	0007	069	030	0	1	0
00656	0028	15.09.10	0008	069	035	0	1	0
00657	0028	15.09.10	0009	048	025	0	1	0
00658	0028	15.09.10	0010	048	030	0	1	0
00659	0028	15.09.10	0011	048	035	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00660	0028	15.09.10	0012	029	035	0	1	0
00661	0028	15.09.10	0013	014	030	0	1	0
00662	0028	15.09.10	0014	014	035	0	1	0
00663	0028	15.09.10	0015	029	025	0	1	0
00664	0028	15.09.10	0016	029	030	0	1	0
00665	0028	15.09.10	0017	029	025	0	1	0
00666	0028	15.09.10	0018	002	035	0	1	0
00667	0028	15.09.10	0019	002	035	0	1	0
00668	0028	15.09.10	0020	002	030	0	1	0
00669	0028	15.09.10	0021	002	020	0	1	0
00670	0028	15.09.10	0022	002	020	0	1	0
00671	0028	15.09.10	0023	002	030	0	1	0
00672	0028	15.09.10	0024	002	030	0	1	0
00673	0029	14.09.10	0001	002	030	0	1	0
00674	0029	14.09.10	0002	048	030	0	1	0
00675	0029	14.09.10	0003	002	030	0	1	0
00676	0029	14.09.10	0004	002	030	0	1	0
00677	0029	14.09.10	0005	002	040	0	1	0
00678	0029	14.09.10	0006	013	030	0	1	0
00679	0029	14.09.10	0007	022	040	0	1	0
00680	0029	14.09.10	0008	022	030	0	1	0
00681	0029	14.09.10	0009	022	020	0	1	0
00682	0029	14.09.10	0010	022	020	0	1	0
00683	0029	14.09.10	0011	048	030	0	1	0
00684	0029	14.09.10	0012	022	040	0	1	0
00685	0029	14.09.10	0013	002	020	0	1	0
00686	0029	14.09.10	0014	002	020	0	1	0
00687	0029	14.09.10	0015	048	030	0	1	0
00688	0029	14.09.10	0016	002	010	0	1	0
00689	0029	14.09.10	0017	002	010	0	1	0
00690	0029	14.09.10	0018	002	010	0	1	0
00691	0029	14.09.10	0019	048	020	0	2	0
00692	0029	14.09.10	0020	048	030	0	1	0
00693	0029	14.09.10	0021	048	030	0	1	0
00694	0029	14.09.10	0022	002	020	0	1	0
00695	0029	14.09.10	0023	002	020	0	1	0
00696	0029	14.09.10	0024	013	040	0	1	0
00697	0030	14.09.10	0001	041	005	0	1	0
00698	0030	14.09.10	0002	048	005	0	1	0
00699	0030	14.09.10	0003	048	005	0	1	0
00700	0030	14.09.10	0004	048	005	0	1	0
00701	0030	14.09.10	0005	048	005	0	1	0
00702	0030	14.09.10	0006	048	005	0	1	0
00703	0030	14.09.10	0007	041	010	0	1	0
00704	0030	14.09.10	0008	041	010	0	1	0
00705	0030	14.09.10	0009	041	010	0	1	0
00706	0030	14.09.10	0010	041	005	0	1	0
00707	0030	14.09.10	0011	041	005	0	1	0
00708	0030	14.09.10	0012	048	005	0	1	0
00709	0030	14.09.10	0013	044	020	0	1	0
00710	0030	14.09.10	0014	044	010	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00711	0030	14.09.10	0015	048	010	0	1	0
00712	0030	14.09.10	0016	048	005	0	1	0
00713	0030	14.09.10	0017	041	005	0	1	0
00714	0030	14.09.10	0018	048	005	0	1	0
00715	0030	14.09.10	0019	048	010	0	1	0
00716	0030	14.09.10	0020	048	020	0	1	0
00717	0030	14.09.10	0021	048	020	0	1	0
00718	0030	14.09.10	0022	048	005	0	1	0
00719	0030	14.09.10	0023	048	005	0	1	0
00720	0030	14.09.10	0024	041	005	0	1	0
00721	0031	15.09.10	0001	040	000	2	1	0
00722	0031	15.09.10	0002	023	000	0	1	0
00723	0031	15.09.10	0003	013	000	2	1	0
00724	0031	15.09.10	0004	013	010	2	1	0
00725	0031	15.09.10	0005	018	000	0	1	0
00726	0031	15.09.10	0006	018	000	0	1	0
00727	0031	15.09.10	0007	036	050	1	1	0
00728	0031	15.09.10	0008	013	010	1	1	0
00729	0031	15.09.10	0009	013	050	2	1	0
00730	0031	15.09.10	0010	013	030	1	1	0
00731	0031	15.09.10	0011	013	040	2	1	0
00732	0031	15.09.10	0012	013	030	2	1	0
00733	0031	15.09.10	0013	018	000	0	1	0
00734	0031	15.09.10	0014	036	020	0	1	0
00735	0031	15.09.10	0015	018	030	0	1	0
00736	0031	15.09.10	0016	018	050	0	1	0
00737	0031	15.09.10	0017	018	030	0	1	0
00738	0031	15.09.10	0018	018	050	0	1	0
00739	0031	15.09.10	0019	036	040	1	1	0
00740	0031	15.09.10	0020	013	045	1	1	0
00741	0031	15.09.10	0021	013	035	0	1	0
00742	0031	15.09.10	0022	018	070	0	1	0
00743	0031	15.09.10	0023	018	020	0	1	0
00744	0031	15.09.10	0024	018	030	0	1	0
00745	0032	07.09.10	0001	018	005	0	1	0
00746	0032	07.09.10	0002	018	005	0	1	0
00747	0032	07.09.10	0003	018	005	0	1	0
00748	0032	07.09.10	0004	018	005	0	1	0
00749	0032	07.09.10	0005	018	005	0	1	0
00750	0032	07.09.10	0006	018	005	0	1	0
00751	0032	07.09.10	0007	018	005	0	1	0
00752	0032	07.09.10	0008	018	005	0	1	0
00753	0032	07.09.10	0009	018	005	0	1	0
00754	0032	07.09.10	0010	018	005	0	1	0
00755	0032	07.09.10	0011	018	005	0	1	0
00756	0032	07.09.10	0012	018	005	0	1	0
00757	0032	07.09.10	0013	018	005	0	1	0
00758	0032	07.09.10	0014	018	005	0	1	0
00759	0032	07.09.10	0015	018	005	0	1	0
00760	0032	07.09.10	0016	018	005	0	1	0
00761	0032	07.09.10	0017	018	005	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00762	0032	07.09.10	0018	018	005	0	1	0
00763	0032	07.09.10	0019	018	005	0	1	0
00764	0032	07.09.10	0020	018	005	0	1	0
00765	0032	07.09.10	0021	018	005	0	1	0
00766	0032	07.09.10	0022	018	005	0	1	0
00767	0032	07.09.10	0023	018	005	0	1	0
00768	0032	07.09.10	0024	018	005	0	1	0
00769	0033	14.09.10	0001	018	010	0	1	0
00770	0033	14.09.10	0002	018	015	0	1	0
00771	0033	14.09.10	0003	018	015	0	1	0
00772	0033	14.09.10	0004	018	020	0	1	0
00773	0033	14.09.10	0005	018	010	0	1	0
00774	0033	14.09.10	0006	018	010	1	1	0
00775	0033	14.09.10	0007	018	010	0	1	0
00776	0033	14.09.10	0008	018	010	0	1	0
00777	0033	14.09.10	0009	018	010	0	1	0
00778	0033	14.09.10	0010	018	015	0	1	0
00779	0033	14.09.10	0011	018	000	0	1	0
00780	0033	14.09.10	0012	018	015	0	1	0
00781	0033	14.09.10	0013	018	020	3	1	0
00782	0033	14.09.10	0014	018	015	0	1	0
00783	0033	14.09.10	0015	018	015	0	1	0
00784	0033	14.09.10	0016	018	020	0	1	0
00785	0033	14.09.10	0017	018	010	0	1	0
00786	0033	14.09.10	0018	018	020	0	1	0
00787	0033	14.09.10	0019	018	010	0	1	0
00788	0033	14.09.10	0020	018	025	0	1	0
00789	0033	14.09.10	0021	018	010	0	1	0
00790	0033	14.09.10	0022	018	015	1	1	0
00791	0033	14.09.10	0023	018	010	0	1	0
00792	0033	14.09.10	0024	018	020	0	1	0
00793	0034	13.09.10	0001	018	030	1	1	0
00794	0034	13.09.10	0002	018	045	1	1	0
00795	0034	13.09.10	0003	100	045	1	1	0
00796	0034	13.09.10	0004	100	050	2	1	0
00797	0034	13.09.10	0005	018	035	1	1	0
00798	0034	13.09.10	0006	018	055	1	1	0
00799	0034	13.09.10	0007	018	045	1	1	0
00800	0034	13.09.10	0008	018	065	1	1	0
00801	0034	13.09.10	0009	018	065	1	1	0
00802	0034	13.09.10	0010	018	050	1	1	0
00803	0034	13.09.10	0011	100	035	1	1	0
00804	0034	13.09.10	0012	100	050	1	1	0
00805	0034	13.09.10	0013	133	045	1	2	0
00806	0034	13.09.10	0014	100	030	1	1	0
00807	0034	13.09.10	0015	100	035	2	1	0
00808	0034	13.09.10	0016	018	025	0	1	0
00809	0034	13.09.10	0017	018	035	1	1	0
00810	0034	13.09.10	0018	100	030	0	1	0
00811	0034	13.09.10	0019	018	030	1	1	0
00812	0034	13.09.10	0020	100	035	1	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00813	0034	13.09.10	0021	018	035	1	1	0
00814	0034	13.09.10	0022	100	040	1	1	0
00815	0034	13.09.10	0023	018	035	1	1	0
00816	0034	13.09.10	0024	018	040	1	1	0
00817	0035	12.09.10	0001	020	005	0	1	0
00818	0035	12.09.10	0002	020	005	0	1	0
00819	0035	12.09.10	0003	020	005	0	1	0
00820	0035	12.09.10	0004	020	005	0	1	0
00821	0035	12.09.10	0005	020	005	0	1	0
00822	0035	12.09.10	0006	020	005	0	1	0
00823	0035	12.09.10	0007	020	005	0	1	0
00824	0035	12.09.10	0008	020	005	0	1	0
00825	0035	12.09.10	0009	020	005	0	1	0
00826	0035	12.09.10	0010	020	005	0	1	0
00827	0035	12.09.10	0011	020	005	0	1	0
00828	0035	12.09.10	0012	020	005	0	1	0
00829	0035	12.09.10	0013	020	005	0	1	0
00830	0035	12.09.10	0014	020	005	0	1	0
00831	0035	12.09.10	0015	020	005	0	1	0
00832	0035	12.09.10	0016	005	005	0	1	0
00833	0035	12.09.10	0017	020	005	0	1	0
00834	0035	12.09.10	0018	020	005	0	1	0
00835	0035	12.09.10	0019	020	005	0	1	0
00836	0035	12.09.10	0020	020	005	0	1	0
00837	0035	12.09.10	0021	020	005	0	1	0
00838	0035	12.09.10	0022	020	005	0	1	0
00839	0035	12.09.10	0023	020	005	0	1	0
00840	0035	12.09.10	0024	020	005	0	1	0
00841	0036	11.09.10	0001	023	005	0	2	0
00842	0036	11.09.10	0002	023	005	0	2	0
00843	0036	11.09.10	0003	023	005	0	2	0
00844	0036	11.09.10	0004	023	005	0	2	0
00845	0036	11.09.10	0005	001	005	0	1	0
00846	0036	11.09.10	0006	023	005	0	2	0
00847	0036	11.09.10	0007	023	005	0	2	0
00848	0036	11.09.10	0008	023	005	0	2	0
00849	0036	11.09.10	0009	014	005	0	1	0
00850	0036	11.09.10	0010	014	005	0	1	0
00851	0036	11.09.10	0011	023	005	0	2	0
00852	0036	11.09.10	0012	014	005	0	1	0
00853	0036	11.09.10	0013	023	005	0	2	0
00854	0036	11.09.10	0014	023	005	0	2	0
00855	0036	11.09.10	0015	014	005	0	1	0
00856	0036	11.09.10	0016	001	005	0	1	0
00857	0036	11.09.10	0017	001	005	0	1	0
00858	0036	11.09.10	0018	001	005	0	1	0
00859	0036	11.09.10	0019	023	005	0	2	0
00860	0036	11.09.10	0020	014	005	0	1	0
00861	0036	11.09.10	0021	001	005	0	1	0
00862	0036	11.09.10	0022	001	005	0	1	0
00863	0036	11.09.10	0023	023	005	0	2	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00864	0036	11.09.10	0024	014	005	0	1	0
00865	0037	16.09.10	0001	035	005	0	1	0
00866	0037	16.09.10	0002	035	005	0	1	0
00867	0037	16.09.10	0003	013	005	0	1	0
00868	0037	16.09.10	0004	041	005	0	1	0
00869	0037	16.09.10	0005	013	005	0	1	0
00870	0037	16.09.10	0006	013	005	0	1	0
00871	0037	16.09.10	0007	029	010	0	1	0
00872	0037	16.09.10	0008	029	010	0	1	0
00873	0037	16.09.10	0009	029	010	0	1	0
00874	0037	16.09.10	0010	029	010	0	1	0
00875	0037	16.09.10	0011	029	010	0	1	0
00876	0037	16.09.10	0012	029	005	0	1	0
00877	0037	16.09.10	0013	013	005	0	1	0
00878	0037	16.09.10	0014	013	005	0	1	0
00879	0037	16.09.10	0015	013	005	0	1	0
00880	0037	16.09.10	0016	029	010	0	1	0
00881	0037	16.09.10	0017	029	010	0	1	0
00882	0037	16.09.10	0018	029	010	0	1	0
00883	0037	16.09.10	0019	020	005	0	1	0
00884	0037	16.09.10	0020	020	005	0	1	0
00885	0037	16.09.10	0021	013	005	0	1	0
00886	0037	16.09.10	0022	020	005	0	1	0
00887	0037	16.09.10	0023	020	005	0	1	0
00888	0037	16.09.10	0024	020	005	0	1	0
00889	0038	14.09.10	0001	014	005	0	1	0
00890	0038	14.09.10	0002	014	005	0	1	0
00891	0038	14.09.10	0003	014	005	0	1	0
00892	0038	14.09.10	0004	014	005	0	1	0
00893	0038	14.09.10	0005	014	005	0	1	0
00894	0038	14.09.10	0006	041	005	0	1	0
00895	0038	14.09.10	0007	014	005	0	1	0
00896	0038	14.09.10	0008	014	005	0	1	0
00897	0038	14.09.10	0009	014	005	0	1	0
00898	0038	14.09.10	0010	014	005	0	1	0
00899	0038	14.09.10	0011	014	005	0	1	0
00900	0038	14.09.10	0012	014	005	0	1	0
00901	0038	14.09.10	0013	014	005	0	1	0
00902	0038	14.09.10	0014	014	005	0	1	0
00903	0038	14.09.10	0015	014	005	0	1	0
00904	0038	14.09.10	0016	014	005	0	1	0
00905	0038	14.09.10	0017	014	005	0	1	0
00906	0038	14.09.10	0018	014	005	0	1	0
00907	0038	14.09.10	0019	014	005	0	1	0
00908	0038	14.09.10	0020	014	005	0	1	0
00909	0038	14.09.10	0021	014	005	0	1	0
00910	0038	14.09.10	0022	023	005	0	2	0
00911	0038	14.09.10	0023	023	005	0	2	0
00912	0038	14.09.10	0024	041	005	0	1	0
00913	0039	10.09.10	0001	111	010	0	1	0
00914	0039	10.09.10	0002	014	010	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
00915	0039	10.09.10	0003	023	025	0	1	0
00916	0039	10.09.10	0004	042	015	0	1	0
00917	0039	10.09.10	0005	013	010	0	1	0
00918	0039	10.09.10	0006	023	010	0	1	0
00919	0039	10.09.10	0007	014	015	0	1	0
00920	0039	10.09.10	0008	014	015	0	1	0
00921	0039	10.09.10	0009	111	025	0	1	0
00922	0039	10.09.10	0010	023	025	0	1	0
00923	0039	10.09.10	0011	023	015	0	1	0
00924	0039	10.09.10	0012	014	020	0	1	0
00925	0039	10.09.10	0013	014	020	0	1	0
00926	0039	10.09.10	0014	014	020	0	1	0
00927	0039	10.09.10	0015	014	020	0	1	0
00928	0039	10.09.10	0016	111	020	0	1	0
00929	0039	10.09.10	0017	042	015	0	1	0
00930	0039	10.09.10	0018	042	015	0	1	0
00931	0039	10.09.10	0019	042	015	0	1	0
00932	0039	10.09.10	0020	023	010	0	1	0
00933	0039	10.09.10	0021	014	010	0	1	0
00934	0039	10.09.10	0022	042	015	0	1	0
00935	0039	10.09.10	0023	111	010	0	1	0
00936	0039	10.09.10	0024	042	015	0	1	0
00937	0040	13.09.10	0001	129	010	0	1	0
00938	0040	13.09.10	0002	129	025	0	2	0
00939	0040	13.09.10	0003	129	025	0	2	0
00940	0040	13.09.10	0004	129	020	0	2	0
00941	0040	13.09.10	0005	129	020	0	2	0
00942	0040	13.09.10	0006	129	010	0	1	0
00943	0040	13.09.10	0007	129	035	0	2	0
00944	0040	13.09.10	0008	129	040	0	2	0
00945	0040	13.09.10	0009	129	030	0	2	0
00946	0040	13.09.10	0010	129	030	0	2	0
00947	0040	13.09.10	0011	129	040	0	2	0
00948	0040	13.09.10	0012	129	035	0	2	0
00949	0040	13.09.10	0013	129	035	0	2	0
00950	0040	13.09.10	0014	129	035	0	2	0
00951	0040	13.09.10	0015	129	055	0	2	0
00952	0040	13.09.10	0016	129	025	0	2	0
00953	0040	13.09.10	0017	129	030	0	1	0
00954	0040	13.09.10	0018	129	020	0	2	0
00955	0040	13.09.10	0019	129	035	0	2	0
00956	0040	13.09.10	0020	129	035	0	2	0
00957	0040	13.09.10	0021	129	035	0	2	0
00958	0040	13.09.10	0022	129	025	0	2	0
00959	0040	13.09.10	0023	129	015	0	1	0
00960	0040	13.09.10	0024	129	015	0	1	0
00961	0041	13.09.10	0001	100	025	0	1	0
00962	0041	13.09.10	0002	100	020	1	1	0
00963	0041	13.09.10	0003	100	025	1	1	0
00964	0041	13.09.10	0004	100	025	1	1	0
00965	0041	13.09.10	0005	100	025	0	1	0

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00966	0041	13.09.10	0006	100	025	1	1	0
00967	0041	13.09.10	0007	100	015	1	1	0
00968	0041	13.09.10	0008	100	020	1	2	0
00969	0041	13.09.10	0009	100	020	1	2	0
00970	0041	13.09.10	0010	100	025	1	1	0
00971	0041	13.09.10	0011	100	025	1	1	0
00972	0041	13.09.10	0012	100	025	1	1	0
00973	0041	13.09.10	0013	100	010	0	1	0
00974	0041	13.09.10	0014	118	030	1	1	0
00975	0041	13.09.10	0015	100	020	1	1	0
00976	0041	13.09.10	0016	100	015	0	2	0
00977	0041	13.09.10	0017	100	025	1	1	0
00978	0041	13.09.10	0018	100	025	1	1	0
00979	0041	13.09.10	0019	100	020	1	1	0
00980	0041	13.09.10	0020	100	015	1	1	0
00981	0041	13.09.10	0021	100	025	1	1	0
00982	0041	13.09.10	0022	100	025	1	1	0
00983	0041	13.09.10	0023	100	025	1	1	0
00984	0041	13.09.10	0024	100	020	1	1	0
00985	0042	10.09.10	0001	023	005	0	1	0
00986	0042	10.09.10	0002	073	005	0	1	0
00987	0042	10.09.10	0003	046	005	0	1	0
00988	0042	10.09.10	0004	023	005	0	1	0
00989	0042	10.09.10	0005	073	005	0	1	0
00990	0042	10.09.10	0006	023	005	0	1	0
00991	0042	10.09.10	0007	023	005	0	1	0
00992	0042	10.09.10	0008	023	005	0	1	0
00993	0042	10.09.10	0009	023	005	0	1	0
00994	0042	10.09.10	0010	023	005	0	1	0
00995	0042	10.09.10	0011	046	005	0	1	0
00996	0042	10.09.10	0012	046	005	0	1	0
00997	0042	10.09.10	0013	073	005	0	1	0
00998	0042	10.09.10	0014	073	005	0	1	0
00999	0042	10.09.10	0015	073	005	0	1	0
01000	0042	10.09.10	0016	073	005	0	1	0
01001	0042	10.09.10	0017	023	005	0	1	0
01002	0042	10.09.10	0018	073	005	0	1	0
01003	0042	10.09.10	0019	023	005	0	1	0
01004	0042	10.09.10	0020	023	005	0	1	0
01005	0042	10.09.10	0021	023	005	0	1	0
01006	0042	10.09.10	0022	073	005	0	1	0
01007	0042	10.09.10	0023	073	005	0	1	0
01008	0042	10.09.10	0024	073	005	0	1	0
01009	0043	09.09.10	0001	129	005	0	1	0
01010	0043	09.09.10	0002	129	005	0	1	0
01011	0043	09.09.10	0003	129	005	0	1	0
01012	0043	09.09.10	0004	129	005	0	1	0
01013	0043	09.09.10	0005	129	005	0	1	0
01014	0043	09.09.10	0006	129	005	0	1	0
01015	0043	09.09.10	0007	129	005	0	1	0
01016	0043	09.09.10	0008	129	005	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
01017	0043	09.09.10	0009	129	005	0	1	0
01018	0043	09.09.10	0010	129	005	0	1	0
01019	0043	09.09.10	0011	129	005	0	1	0
01020	0043	09.09.10	0012	129	005	0	1	0
01021	0043	09.09.10	0013	129	005	0	1	0
01022	0043	09.09.10	0014	129	005	0	1	0
01023	0043	09.09.10	0015	129	005	0	1	0
01024	0043	09.09.10	0016	129	005	0	1	0
01025	0043	09.09.10	0017	129	005	0	1	0
01026	0043	09.09.10	0018	129	005	0	1	0
01027	0043	09.09.10	0019	129	005	0	1	0
01028	0043	09.09.10	0020	129	005	0	1	0
01029	0043	09.09.10	0021	129	005	0	1	0
01030	0043	09.09.10	0022	129	005	0	1	0
01031	0043	09.09.10	0023	129	005	0	1	0
01032	0043	09.09.10	0024	129	005	0	1	0
01033	0044	17.09.10	0001	023	030	0	1	0
01034	0044	17.09.10	0002	048	030	0	1	0
01035	0044	17.09.10	0003	023	030	0	1	0
01036	0044	17.09.10	0004	023	030	0	1	0
01037	0044	17.09.10	0005	023	030	1	1	0
01038	0044	17.09.10	0006	048	030	0	1	0
01039	0044	17.09.10	0007	023	030	0	1	0
01040	0044	17.09.10	0008	048	030	0	1	0
01041	0044	17.09.10	0009	023	030	0	1	0
01042	0044	17.09.10	0010	048	030	0	1	0
01043	0044	17.09.10	0011	023	030	0	1	0
01044	0044	17.09.10	0012	048	030	0	1	0
01045	0044	17.09.10	0013	099	030	0	1	0
01046	0044	17.09.10	0014	048	030	0	1	0
01047	0044	17.09.10	0015	048	030	0	1	0
01048	0044	17.09.10	0016	023	030	0	1	0
01049	0044	17.09.10	0017	048	030	0	1	0
01050	0044	17.09.10	0018	023	030	0	1	0
01051	0044	17.09.10	0019	048	030	0	1	0
01052	0044	17.09.10	0020	023	030	0	1	0
01053	0044	17.09.10	0021	048	030	0	1	0
01054	0044	17.09.10	0022	023	030	0	1	0
01055	0044	17.09.10	0023	048	030	0	1	0
01056	0044	17.09.10	0024	048	030	0	1	0
01057	0045	08.09.10	0001	023	020	0	1	0
01058	0045	08.09.10	0002	023	020	0	1	0
01059	0045	08.09.10	0003	023	020	0	1	0
01060	0045	08.09.10	0004	023	020	0	1	0
01061	0045	08.09.10	0005	023	020	0	1	0
01062	0045	08.09.10	0006	023	020	0	1	0
01063	0045	08.09.10	0007	002	010	0	1	0
01064	0045	08.09.10	0008	002	010	0	1	0
01065	0045	08.09.10	0009	041	020	0	1	0
01066	0045	08.09.10	0010	041	020	0	1	0
01067	0045	08.09.10	0011	041	025	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
01068	0045	08.09.10	0012	041	025	0	1	0
01069	0045	08.09.10	0013	048	020	0	1	0
01070	0045	08.09.10	0014	048	015	0	1	0
01071	0045	08.09.10	0015	048	015	0	1	0
01072	0045	08.09.10	0016	048	020	0	1	0
01073	0045	08.09.10	0017	041	020	0	1	0
01074	0045	08.09.10	0018	041	025	0	1	0
01075	0045	08.09.10	0019	048	020	0	1	0
01076	0045	08.09.10	0020	002	010	0	1	0
01077	0045	08.09.10	0021	048	020	0	1	0
01078	0045	08.09.10	0022	041	020	0	1	0
01079	0045	08.09.10	0023	048	025	0	1	0
01080	0045	08.09.10	0024	048	020	0	1	0
01081	0046	09.09.10	0001	042	020	0	1	0
01082	0046	09.09.10	0002	042	020	0	1	0
01083	0046	09.09.10	0003	042	005	0	1	0
01084	0046	09.09.10	0004	042	010	0	1	0
01085	0046	09.09.10	0005	042	020	0	1	0
01086	0046	09.09.10	0006	042	025	0	1	0
01087	0046	09.09.10	0007	042	010	0	1	0
01088	0046	09.09.10	0008	042	010	0	1	0
01089	0046	09.09.10	0009	042	010	0	1	0
01090	0046	09.09.10	0010	042	010	0	1	0
01091	0046	09.09.10	0011	042	020	0	1	0
01092	0046	09.09.10	0012	042	020	0	1	0
01093	0046	09.09.10	0013	042	015	0	1	0
01094	0046	09.09.10	0014	042	015	0	1	0
01095	0046	09.09.10	0015	042	015	0	1	0
01096	0046	09.09.10	0016	042	015	0	1	0
01097	0046	09.09.10	0017	042	015	0	1	0
01098	0046	09.09.10	0018	042	015	0	1	0
01099	0046	09.09.10	0019	042	020	0	1	0
01100	0046	09.09.10	0020	042	020	0	1	0
01101	0046	09.09.10	0021	042	005	0	1	0
01102	0046	09.09.10	0022	042	010	0	1	0
01103	0046	09.09.10	0023	042	020	0	1	0
01104	0046	09.09.10	0024	042	025	0	1	0
01105	0047	13.09.10	0001	041	025	0	1	0
01106	0047	13.09.10	0002	023	005	0	1	0
01107	0047	13.09.10	0003	029	030	0	1	0
01108	0047	13.09.10	0004	029	005	0	1	0
01109	0047	13.09.10	0005	041	005	0	1	0
01110	0047	13.09.10	0006	023	005	0	1	0
01111	0047	13.09.10	0007	029	005	0	1	0
01112	0047	13.09.10	0008	023	025	0	1	0
01113	0047	13.09.10	0009	023	005	0	1	0
01114	0047	13.09.10	0010	029	025	0	1	0
01115	0047	13.09.10	0011	029	005	0	1	0
01116	0047	13.09.10	0012	029	005	0	1	0
01117	0047	13.09.10	0013	023	025	0	1	0
01118	0047	13.09.10	0014	023	025	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
01119	0047	13.09.10	0015	029	025	0	1	0
01120	0047	13.09.10	0016	023	030	0	1	0
01121	0047	13.09.10	0017	023	030	0	1	0
01122	0047	13.09.10	0018	029	025	0	1	0
01123	0047	13.09.10	0019	029	025	0	1	0
01124	0047	13.09.10	0020	041	025	0	1	0
01125	0047	13.09.10	0021	029	025	0	1	0
01126	0047	13.09.10	0022	041	005	0	2	0
01127	0047	13.09.10	0023	041	005	0	1	0
01128	0047	13.09.10	0024	029	005	0	1	0
01129	0048	11.09.10	0001	110	005	0	2	0
01130	0048	11.09.10	0002	110	005	0	2	0
01131	0048	11.09.10	0003	129	005	0	2	0
01132	0048	11.09.10	0004	129	005	0	2	0
01133	0048	11.09.10	0005	129	005	0	2	0
01134	0048	11.09.10	0006	129	005	0	2	0
01135	0048	11.09.10	0007	129	025	0	2	0
01136	0048	11.09.10	0008	129	025	0	2	0
01137	0048	11.09.10	0009	129	025	0	2	0
01138	0048	11.09.10	0010	129	025	0	2	0
01139	0048	11.09.10	0011	129	025	0	2	0
01140	0048	11.09.10	0012	129	025	0	2	0
01141	0048	11.09.10	0013	110	005	0	2	0
01142	0048	11.09.10	0014	110	025	0	2	0
01143	0048	11.09.10	0015	129	025	0	2	0
01144	0048	11.09.10	0016	129	025	0	2	0
01145	0048	11.09.10	0017	129	025	0	2	0
01146	0048	11.09.10	0018	129	025	0	2	0
01147	0048	11.09.10	0019	110	005	0	2	0
01148	0048	11.09.10	0020	129	025	0	2	0
01149	0048	11.09.10	0021	110	005	0	2	0
01150	0048	11.09.10	0022	129	025	0	2	0
01151	0048	11.09.10	0023	129	025	0	2	0
01152	0048	11.09.10	0024	129	025	0	2	0
01153	0049	11.09.10	0001	049	025	0	1	0
01154	0049	11.09.10	0002	049	025	0	1	0
01155	0049	11.09.10	0003	014	025	0	1	0
01156	0049	11.09.10	0004	023	025	0	1	0
01157	0049	11.09.10	0005	042	025	0	1	0
01158	0049	11.09.10	0006	042	025	0	1	0
01159	0049	11.09.10	0007	044	005	0	1	0
01160	0049	11.09.10	0008	044	025	0	1	0
01161	0049	11.09.10	0009	081	005	0	1	0
01162	0049	11.09.10	0010	081	005	0	1	0
01163	0049	11.09.10	0011	023	025	0	1	0
01164	0049	11.09.10	0012	044	026	0	1	0
01165	0049	11.09.10	0013	023	005	0	1	0
01166	0049	11.09.10	0014	022	025	0	1	0
01167	0049	11.09.10	0015	048	025	0	1	0
01168	0049	11.09.10	0016	081	025	0	1	0
01169	0049	11.09.10	0017	023	025	0	1	0

Stablo/ Tree No.	Tacka/ Observation point	Datum Merenja/ Date of observation	Rbr. Stabla / No. Of Tree	Vrsta Drveta/ Tree species	Defolijacija % / Defoliation %	Dekolorizacija / Decolorisation	Plodonošenje/ Fructification	Ostala zapažanja/ Other
01170	0049	11.09.10	0018	023	025	0	1	0
01171	0049	11.09.10	0019	049	025	0	1	0
01172	0049	11.09.10	0020	049	025	0	1	0
01173	0049	11.09.10	0021	023	025	0	1	0
01174	0049	11.09.10	0022	049	025	0	1	0
01175	0049	11.09.10	0023	049	005	0	1	0
01176	0049	11.09.10	0024	049	025	0	1	0

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Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
1	15.9.2010	1	00	00	00	0	0	000	000	0	0
1	15.9.2010	2	00	00	00	0	0	000	000	0	0
1	15.9.2010	3	00	00	00	0	0	000	000	0	0
1	15.9.2010	4	00	00	00	0	0	000	000	0	0
1	15.9.2010	5	00	00	00	0	0	000	000	0	0
1	15.9.2010	6	00	00	00	0	0	000	000	0	0
1	15.9.2010	7	00	00	00	0	0	000	000	0	0
1	15.9.2010	8	00	00	00	0	0	000	000	0	0
1	15.9.2010	9	00	00	00	0	0	000	000	0	0
1	15.9.2010	10	00	00	00	0	0	000	000	0	0
1	15.9.2010	11	00	00	00	0	0	000	000	0	0
1	15.9.2010	12	00	00	00	0	0	000	000	0	0
1	15.9.2010	13	00	00	00	0	0	000	000	0	0
1	15.9.2010	14	00	00	00	0	0	000	000	0	0
1	15.9.2010	15	00	00	00	0	0	000	000	0	0
1	15.9.2010	16	00	00	00	0	0	000	000	0	0
1	15.9.2010	17	00	00	00	0	0	000	000	0	0
1	15.9.2010	18	00	00	00	0	0	000	000	0	0
1	15.9.2010	19	00	00	00	0	0	000	000	0	0
1	15.9.2010	20	00	00	00	0	0	000	000	0	0
1	15.9.2010	21	00	00	00	0	0	000	000	0	0
1	15.9.2010	22	00	00	00	0	0	000	000	0	0
1	15.9.2010	23	00	00	00	0	0	000	000	0	0
1	15.9.2010	24	00	00	00	0	0	000	000	0	0
2	13.9.2010	1	00	00	00	0	0	000	000	0	0
2	13.9.2010	2	00	00	00	0	0	000	000	0	0
2	13.9.2010	3	00	00	00	0	0	000	000	0	0
2	13.9.2010	4	00	00	00	0	0	000	000	0	0
2	13.9.2010	5	12	02	00	0	0	008	999	0	0
2	13.9.2010	6	00	00	00	0	0	000	000	0	0
2	13.9.2010	7	00	00	00	0	0	000	000	0	0
2	13.9.2010	8	00	00	00	0	0	000	000	0	0
2	13.9.2010	9	00	00	00	0	0	000	000	0	0
2	13.9.2010	10	00	00	00	0	0	000	000	0	0
2	13.9.2010	11	00	00	00	0	0	000	000	0	0
2	13.9.2010	12	00	00	00	0	0	000	000	0	0
2	13.9.2010	13	00	00	00	0	0	000	000	0	0
2	13.9.2010	14	00	00	00	0	0	000	000	0	0
2	13.9.2010	15	00	00	00	0	0	000	000	0	0
2	13.9.2010	16	00	00	00	0	0	000	000	0	0
2	13.9.2010	17	00	00	00	0	0	000	000	0	0
2	13.9.2010	18	00	00	00	0	0	000	000	0	0
2	13.9.2010	19	00	00	00	0	0	000	000	0	0
2	13.9.2010	20	00	00	00	0	0	000	000	0	0
2	13.9.2010	21	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
2	13.9.2010	22	00	00	00	0	0	000	000	0	0
2	13.9.2010	23	00	00	00	0	0	000	000	0	0
2	13.9.2010	24	00	00	00	0	0	000	000	0	0
3	14.9.2010	1	14	10	31	4	1	210	999	1	0
3	14.9.2010	2	22	10	60	4	3	220	999	2	0
3	14.9.2010	3	14	01	31	4	1	210	999	1	0
3	14.9.2010	4	14	01	31	4	1	210	999	1	0
3	14.9.2010	5	14	01	31	4	1	210	999	1	0
3	14.9.2010	6	14	01	31	4	1	210	999	1	0
3	14.9.2010	7	00	00	00	0	0	000	000	0	0
3	14.9.2010	8	00	00	00	0	0	000	000	0	0
3	14.9.2010	9	00	00	00	0	0	000	000	0	0
3	14.9.2010	10	00	00	00	0	0	000	000	0	0
3	14.9.2010	11	00	00	00	0	0	000	000	0	0
3	14.9.2010	12	00	00	00	0	0	000	000	0	0
3	14.9.2010	13	00	00	00	0	0	000	000	0	0
3	14.9.2010	14	00	00	00	0	0	000	000	0	0
3	14.9.2010	15	00	00	00	0	0	000	000	0	0
3	14.9.2010	16	00	00	00	0	0	000	000	0	0
3	14.9.2010	17	00	00	00	0	0	000	000	0	0
3	14.9.2010	18	00	00	00	0	0	000	000	0	0
3	14.9.2010	19	00	00	00	0	0	000	000	0	0
3	14.9.2010	20	00	00	00	0	0	000	000	0	0
3	14.9.2010	21	00	00	00	0	0	000	000	0	0
3	14.9.2010	22	00	00	00	0	0	000	000	0	0
3	14.9.2010	23	00	00	00	0	0	000	000	0	0
3	14.9.2010	24	00	00	00	0	0	000	000	0	0
4	06.09.10	1	00	00	00	0	0	000	000	0	0
4	06.09.10	2	00	00	00	0	0	000	000	0	0
4	06.09.10	3	00	00	00	0	0	000	000	0	0
4	06.09.10	4	00	00	00	0	0	000	000	0	0
4	06.09.10	5	32	08	59	0	0	400	000	1	0
4	06.09.10	6	00	00	00	0	0	000	000	0	0
4	06.09.10	7	00	00	00	0	0	000	000	0	0
4	06.09.10	8	31	17	59	0	0	400	000	2	0
4	06.09.10	9	00	00	00	0	0	000	000	0	0
4	06.09.10	10	00	00	00	0	0	000	000	0	0
4	06.09.10	11	00	00	00	0	0	000	000	0	0
4	06.09.10	12	00	00	00	0	0	000	000	0	0
4	06.09.10	13	14	09	50	2	0	270	mikifag	3	0
4	06.09.10	14	00	00	00	0	0	000	000	0	0
4	06.09.10	15	14	09	50	2	0	270	mikifag	2	0
4	06.09.10	16	14	09	50	2	0	270	mikifag	2	0
4	06.09.10	17	14	09	50	2	0	270	mikifag	3	0
4	06.09.10	18	14	09	50	2	0	270	mikifag	3	0
4	06.09.10	19	14	09	50	2	0	270	mikifag	2	0
4	06.09.10	20	14	09	50	2	0	270	mikifag	1	0
4	06.09.10	21	00	00	00	0	0	000	000	0	0
4	06.09.10	22	00	00	00	0	0	000	000	0	0
4	06.09.10	23	00	00	00	0	0	000	000	0	0
4	06.09.10	24	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
5	07.09.10	1	00	00	00	0	0	000	000	0	0
5	07.09.10	2	00	00	00	0	0	000	000	0	0
5	07.09.10	3	00	00	00	0	0	000	000	0	0
5	07.09.10	4	32	08	39	0	0	400	000	2	0
5	07.09.10	5	00	00	00	0	0	000	000	0	0
5	07.09.10	6	00	00	00	0	0	000	000	0	0
5	07.09.10	7	00	00	00	0	0	000	000	0	0
5	07.09.10	8	00	00	00	0	0	000	000	0	0
5	07.09.10	9	00	00	00	0	0	000	000	0	0
5	07.09.10	10	00	00	00	0	0	000	000	0	0
5	07.09.10	11	32	11	60	0	0	999	000	1	0
5	07.09.10	12	00	00	00	0	0	000	000	0	0
5	07.09.10	13	00	00	00	0	0	000	000	0	0
5	07.09.10	14	00	00	00	0	0	000	000	0	0
5	07.09.10	15	00	00	00	0	0	000	000	0	0
5	07.09.10	16	00	00	00	0	0	000	000	0	0
5	07.09.10	17	00	00	00	0	0	000	000	0	0
5	07.09.10	18	00	00	00	0	0	000	000	0	0
5	07.09.10	19	00	00	00	0	0	000	000	0	0
5	07.09.10	20	00	00	00	0	0	000	000	0	0
5	07.09.10	21	00	00	00	0	0	000	000	0	0
5	07.09.10	22	32	08	59	0	0	400	000	2	0
5	07.09.10	23	00	00	00	0	0	000	000	0	0
5	07.09.10	24	32	08	59	0	0	400	000	1	0
6	10.09.10	1	00	00	00	0	0	000	000	0	0
6	10.09.10	2	12	02	37	4	3	999	000	4	0
6	10.09.10	3	00	00	00	0	0	000	000	0	0
6	10.09.10	4	12	02	37	4	3	999	000	3	0
6	10.09.10	5	00	00	00	0	0	000	000	0	0
6	10.09.10	6	00	00	00	0	0	000	000	0	0
6	10.09.10	7	23	08	64	2	2	390	000	2	0
6	10.09.10	8	00	00	00	0	0	000	000	0	0
6	10.09.10	9	00	00	00	0	0	000	000	0	0
6	10.09.10	10	00	00	00	0	0	000	000	0	0
6	10.09.10	11	00	00	00	0	0	000	000	0	0
6	10.09.10	12	00	00	00	0	0	000	000	0	0
6	10.09.10	13	31	13	00	1	2	432	000	2	0
6	10.09.10	14	00	00	00	0	0	000	000	0	0
6	10.09.10	15	00	00	00	0	0	000	000	0	0
6	10.09.10	16	00	00	00	0	0	000	000	0	0
6	10.09.10	17	00	00	00	0	0	000	000	0	0
6	10.09.10	18	00	00	00	0	0	000	000	0	0
6	10.09.10	19	00	00	00	0	0	000	000	0	0
6	10.09.10	20	00	00	00	0	0	000	000	0	0
6	10.09.10	21	00	00	00	0	0	000	000	0	0
6	10.09.10	22	33	17	60	0	2	545	000	3	0
6	10.09.10	23	32	08	52	0	2	431	000	1	0
6	10.09.10	24	00	00	00	0	0	000	000	0	0
7	14.09.10	1	00	00	00	0	0	000	000	0	0
7	14.09.10	2	00	00	00	0	0	000	000	0	0
7	14.09.10	3	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
7	14.09.10	4	00	00	00	0	0	000	000	0	0
7	14.09.10	5	00	00	00	0	0	000	000	0	0
7	14.09.10	6	00	00	00	0	0	000	000	0	0
7	14.09.10	7	00	00	00	0	0	000	000	0	0
7	14.09.10	8	00	00	00	0	0	000	000	0	0
7	14.09.10	9	00	00	00	0	0	000	000	0	0
7	14.09.10	10	00	00	00	0	0	000	000	0	0
7	14.09.10	11	00	00	00	0	0	000	000	0	0
7	14.09.10	12	00	00	00	0	0	000	000	0	0
7	14.09.10	13	00	00	00	0	0	000	000	0	0
7	14.09.10	14	00	00	00	0	0	000	000	0	0
7	14.09.10	15	00	00	00	0	0	000	000	0	0
7	14.09.10	16	00	00	00	0	0	000	000	0	0
7	14.09.10	17	00	00	00	0	0	000	000	0	0
7	14.09.10	18	00	00	00	0	0	000	000	0	0
7	14.09.10	19	00	00	00	0	0	000	000	0	0
7	14.09.10	20	00	00	00	0	0	000	000	0	0
7	14.09.10	21	00	00	00	0	0	000	000	0	0
7	14.09.10	22	00	00	00	0	0	000	000	0	0
7	14.09.10	23	00	00	00	0	0	000	000	0	0
7	14.09.10	24	00	00	00	0	0	000	000	0	0
8	11.09.10	1	00	00	00	0	0	000	000	0	0
8	11.09.10	2	31	20	62	2	3	300	000	3	0
8	11.09.10	3	00	00	00	0	0	000	000	0	0
8	11.09.10	4	00	00	00	0	0	000	000	0	0
8	11.09.10	5	00	00	00	0	0	000	000	0	0
8	11.09.10	6	00	00	00	0	0	000	000	0	0
8	11.09.10	7	00	00	00	0	0	000	000	0	0
8	11.09.10	8	00	00	00	0	0	000	000	0	0
8	11.09.10	9	00	00	00	0	0	000	000	0	0
8	11.09.10	10	00	00	00	0	0	000	000	0	0
8	11.09.10	11	00	00	00	0	0	000	000	0	0
8	11.09.10	12	00	00	00	0	0	000	000	0	0
8	11.09.10	13	00	00	00	0	0	000	000	0	0
8	11.09.10	14	23	08	64	3	2	300	000	1	0
8	11.09.10	15	00	00	00	0	0	000	000	0	0
8	11.09.10	16	33	17	59	0	2	999	000	3	0
8	11.09.10	17	00	00	00	0	0	000	000	0	0
8	11.09.10	18	00	00	00	0	0	000	000	0	0
8	11.09.10	19	00	00	00	0	0	000	000	0	0
8	11.09.10	20	00	00	00	0	0	000	000	0	0
8	11.09.10	21	00	00	00	0	0	000	000	0	0
8	11.09.10	22	34	18	65	0	2	200	000	5	0
8	11.09.10	23	00	00	00	0	0	000	000	0	0
8	11.09.10	24	00	00	00	0	0	000	000	0	0
9	10.09.10	1	31	08	68	4	2	500	000	4	0
9	10.09.10	2	31	08	68	4	2	500	000	4	0
9	10.09.10	3	31	08	68	4	2	500	000	4	0
9	10.09.10	4	01	31	00	4	1	200	000	1	0
9	10.09.10	5	31	08	68	4	2	500	000	4	0
9	10.09.10	6	31	08	68	4	2	500	000	4	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
9	10.09.10	7	31	08	68	4	2	300	000	4	0
9	10.09.10	8	31	08	68	4	2	300	000	4	0
9	10.09.10	9	31	08	68	4	2	300	000	4	0
9	10.09.10	10	01	31	00	4	1	200	000	1	0
9	10.09.10	11	31	08	68	4	2	600	000	4	0
9	10.09.10	12	01	31	00	4	1	200	000	1	0
9	10.09.10	13	31	08	68	4	2	500	000	4	0
9	10.09.10	14	31	08	68	4	2	500	000	4	0
9	10.09.10	15	31	08	68	4	2	500	000	4	0
9	10.09.10	16	31	08	68	4	2	500	000	4	0
9	10.09.10	17	31	08	68	4	2	500	000	4	0
9	10.09.10	18	31	08	68	4	2	500	000	4	0
9	10.09.10	19	31	08	68	4	2	500	000	4	0
9	10.09.10	20	00	00	00	0	0	000	000	0	0
9	10.09.10	21	31	08	68	4	2	500	000	4	0
9	10.09.10	22	31	08	68	4	2	500	000	4	0
9	10.09.10	23	31	08	68	4	2	500	000	4	0
9	10.09.10	24	00	00	00	0	0	000	000	0	0
10	14.09.10	1	14	19	00	0	0	210	000	2	0
10	14.09.10	2	32	09	00	0	0	600	000	2	0
10	14.09.10	3	34	09	00	0	0	600	000	1	0
10	14.09.10	4	00	00	00	0	0	000	000	0	0
10	14.09.10	5	32	09	00	0	0	600	000	1	0
10	14.09.10	6	14	10	00	0	0	210	000	2	0
10	14.09.10	7	14	10	00	0	0	210	000	2	0
10	14.09.10	8	14	10	00	0	0	210	000	2	0
10	14.09.10	9	26	14	00	0	0	999	000	1	0
10	14.09.10	10	14	10	00	0	0	999	000	1	0
10	14.09.10	11	14	10	00	0	0	999	000	1	0
10	14.09.10	12	14	14	00	0	0	999	000	1	0
10	14.09.10	13	32	09	00	0	0	600	000	2	0
10	14.09.10	14	32	08	00	0	0	999	000	2	0
10	14.09.10	15	32	08	00	0	0	999	000	2	0
10	14.09.10	16	14	10	00	0	0	210	000	1	0
10	14.09.10	17	32	09	00	0	0	999	000	1	0
10	14.09.10	18	32	09	00	0	0	999	000	1	0
10	14.09.10	19	14	10	00	0	0	210	000	2	0
10	14.09.10	20	14	10	00	0	0	210	000	3	0
10	14.09.10	21	14	10	00	0	0	210	000	3	0
10	14.09.10	22	14	10	00	0	0	210	000	1	0
10	14.09.10	23	14	10	00	0	0	210	000	1	0
10	14.09.10	24	32	09	00	0	0	600	000	2	0
11	14.09.10	1	00	00	00	0	0	000	000	0	0
11	14.09.10	2	00	00	00	0	0	000	000	0	0
11	14.09.10	3	14	10	00	0	0	260	rhynfag	2	0
11	14.09.10	4	14	10	00	0	0	260	rhynfag	1	0
11	14.09.10	5	14	10	00	0	0	260	rhynfag	1	0
11	14.09.10	6	14	10	00	0	0	260	rhynfag	1	0
11	14.09.10	7	14	10	00	0	0	260	rhynfag	2	0
11	14.09.10	8	14	10	00	0	0	260	rhynfag	2	0
11	14.09.10	9	14	10	00	0	0	260	rhynfag	2	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
11	14.09.10	10	14	10	00	0	0	260	rhynfag	2	0
11	14.09.10	11	32	17	60	0	0	999	000	1	0
11	14.09.10	12	14	10	00	0	0	210	altique	1	0
11	14.09.10	13	23	13	00	0	0	999	000	1	0
11	14.09.10	14	00	00	00	0	0	000	000	0	0
11	14.09.10	15	31	13	00	0	0	999	000	1	0
11	14.09.10	16	14	10	00	0	0	210	altique	1	0
11	14.09.10	17	14	10	00	0	0	210	altique	2	0
11	14.09.10	18	14	10	00	0	0	210	altique	1	0
11	14.09.10	19	14	10	00	0	0	260	rhynfag	1	0
11	14.09.10	20	14	10	00	0	0	260	rhynfag	2	0
11	14.09.10	21	14	10	00	0	0	260	rhynfag	2	0
11	14.09.10	22	14	10	00	0	0	260	rhynfag	1	0
11	14.09.10	23	14	10	00	0	0	260	rhynfag	1	0
11	14.09.10	24	14	10	00	0	0	260	rhynfag	1	0
12	03.09.10	1	00	00	00	0	0	000	000	0	0
12	03.09.10	2	00	00	00	0	0	000	000	0	0
12	03.09.10	3	00	00	00	0	0	000	000	0	0
12	03.09.10	4	00	00	00	0	0	000	000	0	0
12	03.09.10	5	32	08	63	0	0	999	000	1	0
12	03.09.10	6	00	00	00	0	0	000	000	0	0
12	03.09.10	7	34	09	00	0	0	600	000	3	0
12	03.09.10	8	00	00	00	0	0	000	000	0	0
12	03.09.10	9	00	00	00	0	0	000	000	0	0
12	03.09.10	10	00	00	00	0	0	000	000	0	0
12	03.09.10	11	00	00	00	0	0	000	000	0	0
12	03.09.10	12	00	00	00	0	0	000	000	0	0
12	03.09.10	13	00	00	00	0	0	000	000	0	0
12	03.09.10	14	31	17	60	0	0	999	000	3	0
12	03.09.10	15	00	00	00	0	0	000	000	0	0
12	03.09.10	16	00	00	00	0	0	000	000	0	0
12	03.09.10	17	00	00	00	0	0	000	000	0	0
12	03.09.10	18	00	00	00	0	0	000	000	0	0
12	03.09.10	19	23	13	60	0	0	999	000	2	0
12	03.09.10	20	14	11	00	0	0	300	Rhytace	3	0
12	03.09.10	21	00	00	00	0	0	000	000	0	0
12	03.09.10	22	00	00	00	0	0	000	000	0	0
12	03.09.10	23	00	00	00	0	0	000	000	0	0
12	03.09.10	24	00	00	00	0	0	000	000	0	0
13	03.09.10	1	14	10	00	0	0	260	Rhynfag	2	0
13	03.09.10	2	14	10	00	0	0	260	Rhynfag	3	0
13	03.09.10	3	14	10	00	0	0	260	Rhynfag	2	0
13	03.09.10	4	14	10	00	0	0	260	Rhynfag	2	0
13	03.09.10	5	00	00	00	0	0	000	000	0	0
13	03.09.10	6	00	00	00	0	0	000	000	0	0
13	03.09.10	7	14	11	00	0	0	300	Rhytace	3	0
13	03.09.10	8	14	10	00	0	0	260	Rhynfag	3	0
13	03.09.10	9	14	10	00	0	0	260	Rhynfag	2	0
13	03.09.10	10	14	10	00	0	0	260	Rhynfag	2	0
13	03.09.10	11	14	10	00	0	0	300	Rhytace	3	0
13	03.09.10	12	14	10	00	0	0	260	Rhynfag	2	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
13	03.09.10	13	14	10	00	0	0	260	Rhynfag	1	0
13	03.09.10	14	14	10	00	0	0	260	Rhynfag	3	0
13	03.09.10	15	14	10	00	0	0	260	Rhynfag	4	0
13	03.09.10	16	14	10	00	0	0	260	Rhynfag	1	0
13	03.09.10	17	14	10	00	0	0	260	Rhynfag	2	0
13	03.09.10	18	14	10	00	0	0	260	Rhynfag	3	0
13	03.09.10	19	00	00	00	0	0	000	000	0	0
13	03.09.10	20	00	00	00	0	0	000	000	0	0
13	03.09.10	21	00	00	00	0	0	000	000	0	0
13	03.09.10	22	00	00	00	0	0	000	000	0	0
13	03.09.10	23	00	00	00	0	0	000	000	0	0
13	03.09.10	24	00	00	00	0	0	000	000	0	0
14	16.09.10	1	34	00	00	0	2	500	000	0	0
14	16.09.10	2	34	00	00	0	2	999	000	0	0
14	16.09.10	3	00	00	00	0	0	000	000	0	0
14	16.09.10	4	00	00	00	0	0	000	000	0	0
14	16.09.10	5	00	00	00	0	0	000	000	0	0
14	16.09.10	6	00	00	00	0	0	000	000	0	0
14	16.09.10	7	00	00	00	0	0	000	000	0	0
14	16.09.10	8	33	00	00	0	2	999	000	0	0
14	16.09.10	9	33	00	00	0	2	999	000	0	0
14	16.09.10	10	00	00	00	0	0	000	000	0	0
14	16.09.10	11	00	00	00	0	0	000	000	0	0
14	16.09.10	12	34	00	00	0	2	999	000	0	0
14	16.09.10	13	34	00	00	0	2	500	000	0	0
14	16.09.10	14	34	00	00	0	2	500	000	0	0
14	16.09.10	15	00	00	00	0	0	000	000	0	0
14	16.09.10	16	00	00	00	0	0	000	000	0	0
14	16.09.10	17	00	00	00	0	0	000	000	0	0
14	16.09.10	18	00	00	00	0	0	000	000	0	0
14	16.09.10	19	00	00	00	0	0	000	000	0	0
14	16.09.10	20	00	00	00	0	0	000	000	0	0
14	16.09.10	21	31	00	00	0	2	400	000	0	0
14	16.09.10	22	00	00	00	0	0	000	000	0	0
14	16.09.10	23	00	00	00	0	0	000	000	0	0
14	16.09.10	24	34	00	00	0	2	999	000	0	0
15	22.09.10	1	34	00	00	0	2	400	000	0	0
15	22.09.10	2	00	00	00	0	0	000	000	0	0
15	22.09.10	3	34	00	00	0	2	400	000	0	0
15	22.09.10	4	34	00	00	0	2	400	000	0	0
15	22.09.10	5	34	00	00	0	2	400	000	0	0
15	22.09.10	6	34	00	00	0	2	400	000	0	0
15	22.09.10	7	00	00	00	0	0	000	000	0	0
15	22.09.10	8	00	00	00	0	0	000	000	0	0
15	22.09.10	9	34	00	00	0	2	400	000	0	0
15	22.09.10	10	34	00	00	0	2	400	000	0	0
15	22.09.10	11	00	00	00	0	0	000	000	0	0
15	22.09.10	12	00	00	00	0	0	000	000	0	0
15	22.09.10	13	34	00	00	0	2	040	000	0	0
15	22.09.10	14	00	00	00	0	0	000	000	0	0
15	22.09.10	15	34	00	00	0	2	400	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
15	22.09.10	16	00	00	00	0	0	000	000	0	0
15	22.09.10	17	00	00	00	0	0	000	000	0	0
15	22.09.10	18	34	00	00	0	2	400	000	0	0
15	22.09.10	19	00	00	00	0	0	000	000	0	0
15	22.09.10	20	34	00	00	0	2	400	000	0	0
15	22.09.10	21	34	00	00	0	2	999	000	0	0
15	22.09.10	22	00	00	00	0	0	000	000	0	0
15	22.09.10	23	00	00	00	0	0	000	000	0	0
15	22.09.10	24	33	00	00	0	2	999	000	0	0
16	09.09.10	1	32	08	63	0	0	000	000	0	0
16	09.09.10	2	00	00	00	0	0	000	000	0	0
16	09.09.10	3	33	08	52	0	0	500	000	2	0
16	09.09.10	4	00	00	00	0	0	000	000	0	0
16	09.09.10	5	33	00	00	0	0	000	000	0	0
16	09.09.10	6	33	20	00	0	0	500	000	2	0
16	09.09.10	7	33	20	00	0	0	500	000	2	0
16	09.09.10	8	33	20	00	0	0	500	000	2	0
16	09.09.10	9	33	20	00	0	0	500	000	2	0
16	09.09.10	10	33	20	00	0	0	500	000	2	0
16	09.09.10	11	33	20	00	0	0	500	000	2	0
16	09.09.10	12	33	20	00	0	0	500	000	2	0
16	09.09.10	13	33	17	00	0	0	500	000	2	0
16	09.09.10	14	33	20	00	0	0	500	000	2	0
16	09.09.10	15	00	00	00	0	0	000	000	0	0
16	09.09.10	16	33	20	00	0	0	500	000	2	0
16	09.09.10	17	33	20	00	0	0	500	000	2	0
16	09.09.10	18	33	20	00	0	0	500	000	2	0
16	09.09.10	19	33	20	00	0	0	500	000	2	0
16	09.09.10	20	33	20	00	0	0	500	000	2	0
16	09.09.10	21	33	20	00	0	0	500	000	2	0
16	09.09.10	22	33	20	00	0	0	500	000	2	0
16	09.09.10	23	33	20	00	0	0	500	000	2	0
16	09.09.10	24	33	20	00	0	0	500	000	2	0
17	15.09.10	1	11	09	01	4	1	200	000	2	0
17	15.09.10	2	11	09	01	4	1	200	000	2	0
17	15.09.10	3	11	09	01	4	1	200	000	2	0
17	15.09.10	4	11	09	01	4	1	200	000	2	0
17	15.09.10	5	11	09	01	4	1	200	000	2	0
17	15.09.10	6	11	09	01	4	1	200	000	2	0
17	15.09.10	7	11	09	01	4	1	200	000	2	0
17	15.09.10	8	11	09	01	4	1	200	000	2	0
17	15.09.10	9	11	09	01	4	1	200	000	2	0
17	15.09.10	10	11	09	01	4	1	200	000	2	0
17	15.09.10	11	11	09	01	4	1	200	000	2	0
17	15.09.10	12	11	09	01	4	1	200	000	2	0
17	15.09.10	13	11	09	01	4	1	200	000	2	0
17	15.09.10	14	11	09	01	4	1	200	000	2	0
17	15.09.10	15	11	09	01	4	1	200	000	2	0
17	15.09.10	16	11	09	01	4	1	200	000	2	0
17	15.09.10	17	11	09	01	4	1	200	000	2	0
17	15.09.10	18	11	09	01	4	1	200	000	2	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
17	15.09.10	19	11	09	01	4	1	200	000	2	0
17	15.09.10	20	11	09	01	4	1	200	000	2	0
17	15.09.10	21	11	09	01	4	1	200	000	2	0
17	15.09.10	22	11	09	01	4	1	200	000	2	0
17	15.09.10	23	11	09	01	4	1	200	000	2	0
17	15.09.10	24	11	09	01	4	1	200	000	2	0
18	15.09.10	1	14	09	00	0	0	999	000	1	0
18	15.09.10	2	14	09	00	0	0	999	000	1	0
18	15.09.10	3	14	09	00	0	0	999	000	1	0
18	15.09.10	4	14	09	00	0	0	999	000	1	0
18	15.09.10	5	14	09	00	0	0	999	000	1	0
18	15.09.10	6	14	09	00	0	0	999	000	1	0
18	15.09.10	7	00	00	00	0	0	000	000	0	0
18	15.09.10	8	00	00	00	0	0	000	000	0	0
18	15.09.10	9	00	00	00	0	0	000	000	0	0
18	15.09.10	10	32	08	00	0	0	999	000	1	0
18	15.09.10	11	00	00	00	0	0	000	000	0	0
18	15.09.10	12	00	00	00	0	0	000	000	0	0
18	15.09.10	13	14	10	00	0	0	210	Altique	2	0
18	15.09.10	14	00	00	00	0	0	000	000	0	0
18	15.09.10	15	00	00	00	0	0	000	000	0	0
18	15.09.10	16	14	10	00	0	0	210	Altique	1	0
18	15.09.10	17	00	00	00	0	0	000	000	0	0
18	15.09.10	18	23	13	00	0	0	999	000	1	0
18	15.09.10	19	00	00	00	0	0	000	000	0	0
18	15.09.10	20	00	00	00	0	0	000	000	0	0
18	15.09.10	21	00	00	00	0	0	000	000	0	0
18	15.09.10	22	14	10	00	0	0	210	Altique	2	0
18	15.09.10	23	14	10	00	0	0	210	Altique	2	0
18	15.09.10	24	14	10	00	0	0	210	Altique	1	0
19	15.09.10	1	25	14	00	3	2	000	000	1	0
19	15.09.10	2	14	09	38	4	2	000	000	2	0
19	15.09.10	3	14	09	38	4	3	000	000	1	0
19	15.09.10	4	00	00	00	0	0	000	000	0	0
19	15.09.10	5	14	09	38	4	2	000	000	2	0
19	15.09.10	6	26	14	00	0	0	000	000	0	0
19	15.09.10	7	00	00	00	0	0	000	000	0	0
19	15.09.10	8	00	00	00	0	0	000	000	0	0
19	15.09.10	9	00	00	00	0	0	000	000	0	0
19	15.09.10	10	00	00	00	0	0	000	000	0	0
19	15.09.10	11	00	00	00	0	0	000	000	0	0
19	15.09.10	12	00	00	00	0	0	000	000	0	0
19	15.09.10	13	00	00	00	0	0	000	000	0	0
19	15.09.10	14	00	00	00	0	0	000	000	0	0
19	15.09.10	15	14	09	38	4	3	000	000	1	0
19	15.09.10	16	00	00	00	0	0	000	000	0	0
19	15.09.10	17	14	09	38	4	2	000	000	1	0
19	15.09.10	18	14	09	38	4	2	000	000	1	0
19	15.09.10	19	14	09	38	4	2	000	000	2	0
19	15.09.10	20	00	00	00	0	0	000	000	0	0
19	15.09.10	21	34	21	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
19	15.09.10	22	00	00	00	0	0	000	000	0	0
19	15.09.10	23	00	00	00	0	0	000	000	0	0
19	15.09.10	24	00	00	00	0	0	000	000	0	0
20	16.09.10	1	14	12	00	0	0	999	000	2	0
20	16.09.10	2	14	12	00	0	0	999	000	2	0
20	16.09.10	3	14	10	00	0	0	210	000	1	0
20	16.09.10	4	14	10	00	0	0	210	000	1	0
20	16.09.10	5	14	10	00	0	0	210	000	1	0
20	16.09.10	6	14	10	00	0	0	210	000	1	0
20	16.09.10	7	14	10	00	0	0	210	000	1	0
20	16.09.10	8	14	10	00	0	0	210	000	1	0
20	16.09.10	9	14	10	00	0	0	210	000	1	0
20	16.09.10	10	14	10	00	0	0	210	000	1	0
20	16.09.10	11	14	10	00	0	0	210	000	2	0
20	16.09.10	12	14	10	00	0	0	210	000	2	0
20	16.09.10	13	14	10	00	0	0	210	000	2	0
20	16.09.10	14	14	10	00	0	0	210	000	2	0
20	16.09.10	15	14	10	00	0	0	210	000	2	0
20	16.09.10	16	14	10	00	0	0	210	000	3	0
20	16.09.10	17	14	10	00	0	0	210	000	3	0
20	16.09.10	18	14	10	00	0	0	210	000	1	0
20	16.09.10	19	14	12	00	0	0	999	000	1	0
20	16.09.10	20	14	12	00	0	0	999	000	1	0
20	16.09.10	21	14	12	00	0	0	999	000	1	0
20	16.09.10	22	14	12	00	0	0	999	000	1	0
20	16.09.10	23	14	12	00	0	0	999	000	1	0
20	16.09.10	24	14	10	00	0	0	210	000	1	0
21	16.09.10	1	14	10	00	0	0	260	Rhynfag	2	0
21	16.09.10	2	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	3	14	10	00	0	0	260	Rhynfag	2	0
21	16.09.10	4	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	5	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	6	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	7	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	8	14	10	00	0	0	260	Rhynfag	2	0
21	16.09.10	9	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	10	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	11	14	10	00	0	0	260	Rhynfag	2	0
21	16.09.10	12	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	13	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	14	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	15	14	10	00	0	0	260	Rhynfag	2	0
21	16.09.10	16	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	17	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	18	14	10	00	0	0	260	Rhynfag	2	0
21	16.09.10	19	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	20	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	21	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	22	14	10	00	0	0	260	Rhynfag	1	0
21	16.09.10	23	14	10	00	0	0	260	Rhynfag	2	0
21	16.09.10	24	14	10	00	0	0	260	Rhynfag	1	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
22	16.09.10	1	00	00	00	0	0	000	000	0	0
22	16.09.10	2	00	00	00	0	0	000	000	0	0
22	16.09.10	3	00	00	00	0	0	000	000	0	0
22	16.09.10	4	00	00	00	0	0	000	000	0	0
22	16.09.10	5	00	00	00	0	0	000	000	0	0
22	16.09.10	6	00	00	00	0	0	000	000	0	0
22	16.09.10	7	00	00	00	0	0	000	000	0	0
22	16.09.10	8	00	00	00	0	0	000	000	0	0
22	16.09.10	9	00	00	00	0	0	000	000	0	0
22	16.09.10	10	00	00	00	0	0	000	000	0	0
22	16.09.10	11	00	00	00	0	0	000	000	0	0
22	16.09.10	12	00	00	00	0	0	000	000	0	0
22	16.09.10	13	00	00	00	0	0	000	000	0	0
22	16.09.10	14	00	00	00	0	0	000	000	0	0
22	16.09.10	15	00	00	00	0	0	000	000	0	0
22	16.09.10	16	00	00	00	0	0	000	000	0	0
22	16.09.10	17	00	00	00	0	0	000	000	0	0
22	16.09.10	18	00	00	00	0	0	000	000	0	0
22	16.09.10	19	00	00	00	0	0	000	000	0	0
22	16.09.10	20	00	00	00	0	0	000	000	0	0
22	16.09.10	21	00	00	00	0	0	000	000	0	0
22	16.09.10	22	00	00	00	0	0	000	000	0	0
22	16.09.10	23	00	00	00	0	0	000	000	0	0
22	16.09.10	24	00	00	00	0	0	000	000	0	0
23	21.09.10	1	00	00	00	0	0	000	000	0	0
23	21.09.10	2	34	20	00	0	2	600	000	0	0
23	21.09.10	3	00	00	00	0	0	000	000	0	0
23	21.09.10	4	34	17	00	0	2	600	000	0	0
23	21.09.10	5	34	17	00	0	2	600	000	0	0
23	21.09.10	6	34	20	00	0	2	600	000	0	0
23	21.09.10	7	34	20	00	0	2	600	000	0	0
23	21.09.10	8	34	20	00	0	2	600	000	0	0
23	21.09.10	9	34	20	00	0	2	600	000	0	0
23	21.09.10	10	00	00	00	0	0	000	000	0	0
23	21.09.10	11	00	00	00	0	0	000	000	0	0
23	21.09.10	12	00	00	00	0	0	000	000	0	0
23	21.09.10	13	00	00	00	0	0	000	000	0	0
23	21.09.10	14	00	00	00	0	0	000	000	0	0
23	21.09.10	15	34	20	00	0	2	600	000	0	0
23	21.09.10	16	00	00	00	0	0	000	000	0	0
23	21.09.10	17	00	00	00	0	0	000	000	0	0
23	21.09.10	18	00	00	00	0	0	000	000	0	0
23	21.09.10	19	00	00	00	0	0	000	000	0	0
23	21.09.10	20	34	20	00	0	2	600	000	0	0
23	21.09.10	21	34	00	00	0	2	999	000	0	0
23	21.09.10	22	00	00	00	0	0	000	000	0	0
23	21.09.10	23	00	00	00	0	0	000	000	0	0
23	21.09.10	24	00	00	00	0	0	000	000	0	0
24	14.09.10	1	00	00	00	0	0	000	000	0	0
24	14.09.10	2	00	00	00	0	0	000	000	0	0
24	14.09.10	3	33	20	52	0	2	300	000	2	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
24	14.09.10	4	00	00	00	0	0	000	000	0	0
24	14.09.10	5	00	00	00	0	0	000	000	0	0
24	14.09.10	6	33	20	52	0	3	300	000	2	0
24	14.09.10	7	00	00	00	0	0	000	000	0	0
24	14.09.10	8	00	00	00	0	0	000	000	0	0
24	14.09.10	9	33	20	52	0	2	300	000	2	0
24	14.09.10	10	00	00	00	0	0	000	000	0	0
24	14.09.10	11	33	20	52	0	3	300	000	2	0
24	14.09.10	12	33	20	52	0	3	300	000	2	0
24	14.09.10	13	33	20	52	0	3	300	000	2	0
24	14.09.10	14	33	20	52	0	2	300	000	2	0
24	14.09.10	15	33	20	52	0	2	300	000	2	0
24	14.09.10	16	00	00	00	0	0	000	000	0	0
24	14.09.10	17	33	20	52	0	2	300	000	2	0
24	14.09.10	18	00	00	00	0	0	000	000	0	0
24	14.09.10	19	32	20	52	0	2	300	000	2	0
24	14.09.10	20	00	00	00	0	0	000	000	0	0
24	14.09.10	21	00	00	00	0	0	000	000	0	0
24	14.09.10	22	00	00	00	0	0	000	000	0	0
24	14.09.10	23	32	20	52	0	2	300	000	3	0
24	14.09.10	24	32	20	52	0	2	300	000	3	0
25	12.09.10	1	11	09	01	4	1	200	000	2	0
25	12.09.10	2	11	09	01	4	1	200	000	2	0
25	12.09.10	3	11	09	01	4	1	200	000	2	0
25	12.09.10	4	11	09	01	4	1	200	000	2	0
25	12.09.10	5	11	09	01	4	1	200	000	2	0
25	12.09.10	6	11	09	01	4	1	200	000	2	0
25	12.09.10	7	11	09	01	4	1	200	000	2	0
25	12.09.10	8	11	09	01	4	1	200	000	2	0
25	12.09.10	9	11	09	01	4	1	200	000	2	0
25	12.09.10	10	11	09	01	4	1	200	000	2	0
25	12.09.10	11	11	09	01	4	1	200	000	2	0
25	12.09.10	12	11	09	01	4	1	200	000	2	0
25	12.09.10	13	11	09	01	4	1	200	000	2	0
25	12.09.10	14	11	09	01	4	1	200	000	2	0
25	12.09.10	15	11	09	01	4	1	200	000	2	0
25	12.09.10	16	11	09	01	4	1	200	000	2	0
25	12.09.10	17	11	09	01	4	1	200	000	2	0
25	12.09.10	18	11	09	01	4	1	200	000	2	0
25	12.09.10	19	11	09	01	4	1	200	000	2	0
25	12.09.10	20	11	09	01	4	1	200	000	2	0
25	12.09.10	21	11	09	01	4	1	200	000	2	0
25	12.09.10	22	11	09	01	4	1	400	000	2	0
25	12.09.10	23	11	09	01	4	1	200	000	2	0
25	12.09.10	24	11	09	01	4	1	200	000	2	0
26	07.09.10	1	31	17	60	0	2	500	000	0	0
26	07.09.10	2	00	00	00	0	0	000	000	0	0
26	07.09.10	3	00	00	00	0	0	000	000	0	0
26	07.09.10	4	00	00	00	0	0	000	000	0	0
26	07.09.10	5	00	00	00	0	0	000	000	0	0
26	07.09.10	6	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
26	07.09.10	7	00	00	00	0	0	000	000	0	0
26	07.09.10	8	00	00	00	0	0	000	000	0	0
26	07.09.10	9	00	00	00	0	0	000	000	0	0
26	07.09.10	10	00	00	00	0	0	000	000	0	0
26	07.09.10	11	00	00	00	0	0	000	000	0	0
26	07.09.10	12	00	00	00	0	0	000	000	0	0
26	07.09.10	13	00	00	00	0	0	000	000	0	0
26	07.09.10	14	00	00	00	0	0	000	000	0	0
26	07.09.10	15	00	00	00	0	0	000	000	0	0
26	07.09.10	16	00	00	00	0	0	000	000	0	0
26	07.09.10	17	00	00	00	0	0	000	000	0	0
26	07.09.10	18	00	00	00	0	0	000	000	0	0
26	07.09.10	19	31	17	60	0	2	500	000	0	0
26	07.09.10	20	00	00	00	0	0	000	000	0	0
26	07.09.10	21	00	00	00	0	0	000	000	0	0
26	07.09.10	22	00	00	00	0	0	000	000	0	0
26	07.09.10	23	31	17	60	0	2	500	000	0	0
26	07.09.10	24	31	18	00	0	2	999	000	0	0
27	18.09.10	1	00	00	00	0	0	000	000	0	0
27	18.09.10	2	31	17	60	0	2	500	000	0	0
27	18.09.10	3	12	03	43	2	2	999	000	0	0
27	18.09.10	4	31	17	60	0	2	500	000	0	0
27	18.09.10	5	31	08	52	0	2	999	000	0	0
27	18.09.10	6	31	17	60	0	2	500	000	0	0
27	18.09.10	7	31	17	60	0	2	500	000	0	0
27	18.09.10	8	31	17	60	0	2	500	000	0	0
27	18.09.10	9	00	00	00	0	0	000	000	0	0
27	18.09.10	10	00	00	00	0	0	000	000	0	0
27	18.09.10	11	31	18	00	0	2	999	000	0	0
27	18.09.10	12	31	17	60	0	2	500	000	0	0
27	18.09.10	13	00	00	00	0	0	000	000	0	0
27	18.09.10	14	31	17	60	0	2	500	000	0	0
27	18.09.10	15	31	17	60	0	2	500	000	0	0
27	18.09.10	16	00	00	00	0	0	000	000	0	0
27	18.09.10	17	00	00	00	0	0	000	000	0	0
27	18.09.10	18	00	00	00	0	0	000	000	0	0
27	18.09.10	19	31	17	60	0	2	500	000	0	0
27	18.09.10	20	00	00	00	0	0	000	000	0	0
27	18.09.10	21	31	08	52	0	2	999	000	0	0
27	18.09.10	22	00	00	00	0	0	000	000	0	0
27	18.09.10	23	31	17	60	0	2	500	000	0	0
27	18.09.10	24	00	00	00	0	0	000	000	0	0
28	15.09.10	1	14	10	00	0	0	210	000	2	0
28	15.09.10	2	14	10	00	0	0	210	000	2	0
28	15.09.10	3	14	10	00	0	0	210	000	2	0
28	15.09.10	4	14	10	00	0	0	210	000	2	0
28	15.09.10	5	14	10	00	0	0	210	000	1	0
28	15.09.10	6	14	10	00	0	0	210	000	1	0
28	15.09.10	7	14	10	00	0	0	210	000	2	0
28	15.09.10	8	14	10	00	0	0	210	000	2	0
28	15.09.10	9	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
28	15.09.10	10	14	10	00	0	0	210	000	1	0
28	15.09.10	11	00	00	00	0	0	000	000	0	0
28	15.09.10	12	14	10	00	0	0	210	000	1	0
28	15.09.10	13	14	10	00	0	0	210	000	1	0
28	15.09.10	14	14	10	00	0	0	210	000	1	0
28	15.09.10	15	14	10	00	0	0	210	000	2	0
28	15.09.10	16	14	10	00	0	0	210	000	2	0
28	15.09.10	17	14	10	00	0	0	210	000	2	0
28	15.09.10	18	14	12	00	0	0	999	000	1	0
28	15.09.10	19	14	12	00	0	0	999	000	3	0
28	15.09.10	20	14	12	00	0	0	999	000	3	0
28	15.09.10	21	14	12	00	0	0	999	000	3	0
28	15.09.10	22	14	12	00	0	0	999	000	3	0
28	15.09.10	23	14	12	00	0	0	999	000	3	0
28	15.09.10	24	14	12	00	0	0	999	000	3	0
29	14.09.10	1	14	03	00	0	0	999	000	3	0
29	14.09.10	2	14	03	00	0	0	999	000	3	0
29	14.09.10	3	14	03	00	0	0	999	000	3	0
29	14.09.10	4	14	03	00	0	0	999	000	3	0
29	14.09.10	5	14	03	00	0	0	999	000	3	0
29	14.09.10	6	14	03	00	0	0	999	000	3	0
29	14.09.10	7	14	03	00	0	0	999	000	3	0
29	14.09.10	8	14	03	00	0	0	999	000	3	0
29	14.09.10	9	14	03	00	0	0	999	000	2	0
29	14.09.10	10	14	03	00	0	0	999	000	2	0
29	14.09.10	11	14	03	00	0	0	999	000	3	0
29	14.09.10	12	14	03	00	0	0	999	000	3	0
29	14.09.10	13	14	03	00	0	0	999	000	2	0
29	14.09.10	14	14	03	00	0	0	999	000	2	0
29	14.09.10	15	14	03	00	0	0	999	000	3	0
29	14.09.10	16	14	03	00	0	0	999	000	1	0
29	14.09.10	17	14	03	00	0	0	999	000	1	0
29	14.09.10	18	14	03	00	0	0	999	000	1	0
29	14.09.10	19	14	03	00	0	0	999	000	2	0
29	14.09.10	20	14	03	00	0	0	999	000	3	0
29	14.09.10	21	14	03	00	0	0	999	000	3	0
29	14.09.10	22	14	03	00	0	0	999	000	2	0
29	14.09.10	23	14	03	00	0	0	999	000	2	0
29	14.09.10	24	14	03	00	0	0	999	000	3	0
30	14.09.10	1	14	02	00	0	0	999	000	1	0
30	14.09.10	2	14	02	00	0	0	999	000	1	0
30	14.09.10	3	14	02	00	0	0	999	000	1	0
30	14.09.10	4	14	02	00	0	0	999	000	1	0
30	14.09.10	5	14	02	00	0	0	999	000	1	0
30	14.09.10	6	14	02	00	0	0	999	000	1	0
30	14.09.10	7	14	02	00	0	0	999	000	1	0
30	14.09.10	8	14	02	00	0	0	999	000	1	0
30	14.09.10	9	14	02	00	0	0	999	000	1	0
30	14.09.10	10	14	02	00	0	0	999	000	1	0
30	14.09.10	11	14	02	00	0	0	999	000	1	0
30	14.09.10	12	14	02	00	0	0	999	000	1	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
30	14.09.10	13	14	02	00	0	0	999	000	2	0
30	14.09.10	14	14	02	00	0	0	999	000	1	0
30	14.09.10	15	14	02	00	0	0	999	000	1	0
30	14.09.10	16	14	02	00	0	0	999	000	1	0
30	14.09.10	17	14	02	00	0	0	999	000	1	0
30	14.09.10	18	14	02	00	0	0	999	000	1	0
30	14.09.10	19	14	02	00	0	0	999	000	1	0
30	14.09.10	20	14	02	00	0	0	999	000	2	0
30	14.09.10	21	14	02	00	0	0	999	000	2	0
30	14.09.10	22	14	02	00	0	0	999	000	1	0
30	14.09.10	23	14	02	00	0	0	999	000	1	0
30	14.09.10	24	14	02	00	0	0	999	000	1	0
31	15.09.10	1	00	00	00	0	0	000	000	0	0
31	15.09.10	2	00	00	00	0	0	000	000	0	0
31	15.09.10	3	00	00	00	0	0	000	000	0	0
31	15.09.10	4	00	00	00	0	0	000	000	0	0
31	15.09.10	5	00	00	00	0	0	000	000	0	0
31	15.09.10	6	00	00	00	0	0	000	000	0	0
31	15.09.10	7	00	00	00	0	0	000	000	0	0
31	15.09.10	8	00	00	00	0	0	000	000	0	0
31	15.09.10	9	00	00	00	0	0	000	000	0	0
31	15.09.10	10	00	00	00	0	0	000	000	0	0
31	15.09.10	11	00	00	00	0	0	000	000	0	0
31	15.09.10	12	00	00	00	0	0	000	000	0	0
31	15.09.10	13	00	00	00	0	0	000	000	0	0
31	15.09.10	14	00	00	00	0	0	000	000	0	0
31	15.09.10	15	00	00	00	0	0	000	000	0	0
31	15.09.10	16	00	00	00	0	0	000	000	0	0
31	15.09.10	17	00	00	00	0	0	000	000	0	0
31	15.09.10	18	00	00	00	0	0	000	000	0	0
31	15.09.10	19	34	00	00	0	2	999	000	0	0
31	15.09.10	20	00	00	00	0	0	000	000	0	0
31	15.09.10	21	00	00	00	0	0	000	000	0	0
31	15.09.10	22	34	00	00	0	2	999	000	0	0
31	15.09.10	23	34	00	00	0	2	999	000	0	0
31	15.09.10	24	34	00	00	0	2	999	000	0	0
32	07.09.10	1	00	00	00	0	0	000	000	0	0
32	07.09.10	2	00	00	00	0	0	000	000	0	0
32	07.09.10	3	00	00	00	0	0	000	000	0	0
32	07.09.10	4	00	00	00	0	0	000	000	0	0
32	07.09.10	5	00	00	00	0	0	000	000	0	0
32	07.09.10	6	00	00	00	0	0	000	000	0	0
32	07.09.10	7	00	00	00	0	0	000	000	0	0
32	07.09.10	8	00	00	00	0	0	000	000	0	0
32	07.09.10	9	00	00	00	0	0	000	000	0	0
32	07.09.10	10	00	00	00	0	0	000	000	0	0
32	07.09.10	11	00	00	00	0	0	000	000	0	0
32	07.09.10	12	00	00	00	0	0	000	000	0	0
32	07.09.10	13	00	00	00	0	0	000	000	0	0
32	07.09.10	14	00	00	00	0	0	000	000	0	0
32	07.09.10	15	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
32	07.09.10	16	00	00	00	0	0	000	000	0	0
32	07.09.10	17	00	00	00	0	0	000	000	0	0
32	07.09.10	18	00	00	00	0	0	000	000	0	0
32	07.09.10	19	00	00	00	0	0	000	000	0	0
32	07.09.10	20	00	00	00	0	0	000	000	0	0
32	07.09.10	21	00	00	00	0	0	000	000	0	0
32	07.09.10	22	00	00	00	0	0	000	000	0	0
32	07.09.10	23	00	00	00	0	0	000	000	0	0
32	07.09.10	24	00	00	00	0	0	000	000	0	0
33	14.09.10	1	00	00	00	0	0	000	000	0	0
33	14.09.10	2	08	00	00	0	0	000	000	0	0
33	14.09.10	3	08	00	00	0	0	000	000	0	0
33	14.09.10	4	17	00	00	0	0	000	000	0	0
33	14.09.10	5	17	00	00	0	0	000	000	0	0
33	14.09.10	6	00	00	00	0	0	000	000	0	0
33	14.09.10	7	11	00	00	0	0	000	000	0	0
33	14.09.10	8	00	00	00	0	0	000	000	0	0
33	14.09.10	9	00	00	00	0	0	000	000	0	0
33	14.09.10	10	08	00	00	0	0	000	000	0	0
33	14.09.10	11	11	00	00	0	0	000	000	0	0
33	14.09.10	12	60	00	00	0	0	000	000	0	0
33	14.09.10	13	60	00	00	0	0	000	000	0	0
33	14.09.10	14	60	00	00	0	0	000	000	0	0
33	14.09.10	15	60	00	00	0	0	000	000	0	0
33	14.09.10	16	60	00	00	0	0	000	000	0	0
33	14.09.10	17	60	00	00	0	0	000	000	0	0
33	14.09.10	18	60	00	00	0	0	000	000	0	0
33	14.09.10	19	60	00	00	0	0	000	000	0	0
33	14.09.10	20	60	00	00	0	0	000	000	0	0
33	14.09.10	21	60	00	00	0	0	000	000	0	0
33	14.09.10	22	60	00	00	0	0	000	000	0	0
33	14.09.10	23	60	00	00	0	0	000	000	0	0
33	14.09.10	24	60	00	00	0	0	000	000	0	0
34	13.09.10	1	31	20	52	0	2	400	000	2	0
34	13.09.10	2	31	20	52	0	2	400	000	2	0
34	13.09.10	3	00	00	00	0	0	000	000	0	0
34	13.09.10	4	31	20	52	0	2	400	000	2	0
34	13.09.10	5	11	09	01	4	1	200	000	2	0
34	13.09.10	6	11	09	01	4	1	200	000	2	0
34	13.09.10	7	11	09	01	4	1	200	000	2	0
34	13.09.10	8	11	09	01	4	1	200	000	2	0
34	13.09.10	9	11	09	01	4	1	200	000	2	0
34	13.09.10	10	31	20	52	4	2	400	000	2	0
34	13.09.10	11	11	09	01	4	1	200	000	2	0
34	13.09.10	12	00	00	00	0	0	000	000	0	0
34	13.09.10	13	00	00	00	0	0	000	000	0	0
34	13.09.10	14	00	00	00	0	0	000	000	0	0
34	13.09.10	15	00	00	00	0	0	000	000	0	0
34	13.09.10	16	11	09	01	4	1	200	000	2	0
34	13.09.10	17	31	20	52	0	2	400	000	2	0
34	13.09.10	18	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
34	13.09.10	19	31	20	52	0	2	400	000	2	0
34	13.09.10	20	31	20	52	0	2	400	000	2	0
34	13.09.10	21	31	20	52	0	2	400	000	2	0
34	13.09.10	22	00	00	00	0	0	000	000	0	0
34	13.09.10	23	31	20	52	0	2	400	000	2	0
34	13.09.10	24	31	20	52	0	2	400	000	2	0
35	12.09.10	1	00	00	00	0	0	000	000	0	0
35	12.09.10	2	00	00	00	0	0	000	000	0	0
35	12.09.10	3	00	00	00	0	0	000	000	0	0
35	12.09.10	4	00	00	00	0	0	000	000	0	0
35	12.09.10	5	00	00	00	0	0	000	000	0	0
35	12.09.10	6	00	00	00	0	0	000	000	0	0
35	12.09.10	7	31	17	60	0	2	400	000	1	0
35	12.09.10	8	00	00	00	0	0	000	000	0	0
35	12.09.10	9	00	00	00	0	0	000	000	0	0
35	12.09.10	10	00	00	00	0	0	000	000	0	0
35	12.09.10	11	00	00	00	0	0	000	000	0	0
35	12.09.10	12	00	00	00	0	0	000	000	0	0
35	12.09.10	13	00	00	00	0	0	000	000	0	0
35	12.09.10	14	00	00	00	0	0	000	000	0	0
35	12.09.10	15	00	00	00	0	0	000	000	0	0
35	12.09.10	16	31	17	59	0	2	400	000	1	0
35	12.09.10	17	00	00	00	0	0	000	000	0	0
35	12.09.10	18	00	00	00	0	0	000	000	0	0
35	12.09.10	19	00	00	00	0	0	000	000	0	0
35	12.09.10	20	00	00	00	0	0	000	000	0	0
35	12.09.10	21	00	00	00	0	0	000	000	0	0
35	12.09.10	22	00	00	00	0	0	000	000	0	0
35	12.09.10	23	00	00	00	0	0	000	000	0	0
35	12.09.10	24	00	00	00	0	0	000	000	0	0
36	11.09.10	1	14	01	39	4	1	000	000	2	0
36	11.09.10	2	14	01	39	4	1	000	000	2	0
36	11.09.10	3	14	01	39	4	1	000	000	2	0
36	11.09.10	4	14	01	39	4	1	000	000	2	0
36	11.09.10	5	14	01	38	4	3	000	000	1	0
36	11.09.10	6	14	01	39	4	1	000	000	2	0
36	11.09.10	7	14	01	39	4	1	000	000	2	0
36	11.09.10	8	14	01	39	4	1	000	000	2	0
36	11.09.10	9	14	01	31	4	1	000	000	1	0
36	11.09.10	10	14	01	31	4	1	000	000	1	0
36	11.09.10	11	14	01	39	4	1	000	000	2	0
36	11.09.10	12	14	01	31	4	1	000	000	2	0
36	11.09.10	13	00	00	00	0	0	000	000	0	0
36	11.09.10	14	00	00	00	0	0	000	000	0	0
36	11.09.10	15	14	01	31	4	1	000	000	1	0
36	11.09.10	16	25	14	00	0	0	000	000	0	0
36	11.09.10	17	25	14	00	0	0	000	000	0	0
36	11.09.10	18	25	14	00	0	0	000	000	0	0
36	11.09.10	19	00	00	00	0	0	000	000	0	0
36	11.09.10	20	00	00	00	0	0	000	000	0	0
36	11.09.10	21	14	09	38	4	3	000	000	1	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
36	11.09.10	22	14	09	38	4	3	000	000	1	0
36	11.09.10	23	14	01	39	4	1	000	000	2	0
36	11.09.10	24	14	01	31	4	1	000	000	1	0
37	16.09.10	1	14	02	00	0	0	999	000	1	0
37	16.09.10	2	14	02	00	0	0	999	000	1	0
37	16.09.10	3	14	02	00	0	0	999	000	1	0
37	16.09.10	4	14	02	00	0	0	999	000	1	0
37	16.09.10	5	14	02	00	0	0	999	000	1	0
37	16.09.10	6	14	02	00	0	0	999	000	1	0
37	16.09.10	7	14	02	00	0	0	999	000	1	0
37	16.09.10	8	14	02	00	0	0	999	000	1	0
37	16.09.10	9	14	02	00	0	0	999	000	1	0
37	16.09.10	10	14	02	00	0	0	999	000	1	0
37	16.09.10	11	14	02	00	0	0	999	000	1	0
37	16.09.10	12	14	02	00	0	0	999	000	1	0
37	16.09.10	13	14	02	00	0	0	999	000	1	0
37	16.09.10	14	14	02	00	0	0	999	000	1	0
37	16.09.10	15	14	02	00	0	0	999	000	1	0
37	16.09.10	16	14	02	00	0	0	999	000	1	0
37	16.09.10	17	14	02	00	0	0	999	000	1	0
37	16.09.10	18	14	02	00	0	0	999	000	1	0
37	16.09.10	19	14	02	00	0	0	999	000	1	0
37	16.09.10	20	14	02	00	0	0	999	000	1	0
37	16.09.10	21	14	02	00	0	0	999	000	1	0
37	16.09.10	22	14	02	00	0	0	999	000	1	0
37	16.09.10	23	14	02	00	0	0	999	000	1	0
37	16.09.10	24	14	02	00	0	0	999	000	1	0
38	14.09.10	1	00	00	00	0	0	000	000	0	0
38	14.09.10	2	00	00	00	0	0	000	000	0	0
38	14.09.10	3	00	00	00	0	0	000	000	0	0
38	14.09.10	4	00	00	00	0	0	000	000	0	0
38	14.09.10	5	00	00	00	0	0	000	000	0	0
38	14.09.10	6	00	00	00	0	0	000	000	0	0
38	14.09.10	7	00	00	00	0	0	000	000	0	0
38	14.09.10	8	00	00	00	0	0	000	000	0	0
38	14.09.10	9	00	00	00	0	0	000	000	0	0
38	14.09.10	10	00	00	00	0	0	000	000	0	0
38	14.09.10	11	00	00	00	0	0	000	000	0	0
38	14.09.10	12	00	00	00	0	0	000	000	0	0
38	14.09.10	13	00	00	00	0	0	000	000	0	0
38	14.09.10	14	00	00	00	0	0	000	000	0	0
38	14.09.10	15	00	00	00	0	0	000	000	0	0
38	14.09.10	16	00	00	00	0	0	000	000	0	0
38	14.09.10	17	00	00	00	0	0	000	000	0	0
38	14.09.10	18	00	00	00	0	0	000	000	0	0
38	14.09.10	19	00	00	00	0	0	000	000	0	0
38	14.09.10	20	00	00	00	0	0	000	000	0	0
38	14.09.10	21	00	00	00	0	0	000	000	0	0
38	14.09.10	22	00	00	00	0	0	000	000	0	0
38	14.09.10	23	00	00	00	0	0	000	000	0	0
38	14.09.10	24	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
39	10.09.10	1	13	02	00	0	0	999	000	1	0
39	10.09.10	2	14	02	00	0	0	999	000	1	0
39	10.09.10	3	14	05	00	0	0	999	000	2	0
39	10.09.10	4	14	11	00	0	0	300	dryolis	2	0
39	10.09.10	5	14	02	00	0	0	999	000	1	0
39	10.09.10	6	14	02	00	0	0	999	000	1	0
39	10.09.10	7	14	02	00	0	0	999	000	2	0
39	10.09.10	8	14	02	00	0	0	999	000	2	0
39	10.09.10	9	13	02	00	0	0	999	000	2	0
39	10.09.10	10	14	02	00	0	0	999	000	2	0
39	10.09.10	11	14	02	00	0	0	999	000	2	0
39	10.09.10	12	14	02	00	0	0	999	000	2	0
39	10.09.10	13	14	02	00	0	0	999	000	2	0
39	10.09.10	14	14	02	00	0	0	999	000	2	0
39	10.09.10	15	14	02	00	0	0	999	000	2	0
39	10.09.10	16	13	02	00	0	0	999	000	2	0
39	10.09.10	17	14	02	00	0	0	999	000	2	0
39	10.09.10	18	14	02	00	0	0	999	000	2	0
39	10.09.10	19	14	11	00	0	0	300	dryolis	2	0
39	10.09.10	20	14	02	00	0	0	999	000	1	0
39	10.09.10	21	14	05	00	0	0	999	000	1	0
39	10.09.10	22	13	11	00	0	0	300	dryolis	2	0
39	10.09.10	23	14	02	00	0	0	999	000	1	0
39	10.09.10	24	14	11	00	0	0	300	dryolis	2	0
40	13.09.10	1	13	03	00	0	0	999	000	1	0
40	13.09.10	2	13	03	00	0	0	999	000	3	0
40	13.09.10	3	13	03	00	0	0	999	000	3	0
40	13.09.10	4	13	03	00	0	0	999	000	2	0
40	13.09.10	5	13	03	00	0	0	999	000	2	0
40	13.09.10	6	13	03	00	0	0	999	000	1	0
40	13.09.10	7	13	03	00	0	0	999	000	3	0
40	13.09.10	8	13	03	00	0	0	999	000	3	0
40	13.09.10	9	13	03	00	0	0	999	000	3	0
40	13.09.10	10	13	03	00	0	0	999	000	3	0
40	13.09.10	11	13	03	00	0	0	999	000	3	0
40	13.09.10	12	13	03	00	0	0	999	000	3	0
40	13.09.10	13	13	03	00	0	0	999	000	3	0
40	13.09.10	14	13	03	00	0	0	999	000	3	0
40	13.09.10	15	13	03	00	0	0	999	000	4	0
40	13.09.10	16	13	03	00	0	0	999	000	3	0
40	13.09.10	17	13	03	00	0	0	999	000	3	0
40	13.09.10	18	13	03	00	0	0	999	000	2	0
40	13.09.10	19	13	03	00	0	0	999	000	3	0
40	13.09.10	20	13	03	00	0	0	999	000	3	0
40	13.09.10	21	13	03	00	0	0	999	000	3	0
40	13.09.10	22	13	03	00	0	0	999	000	3	0
40	13.09.10	23	13	03	00	0	0	999	000	2	0
40	13.09.10	24	13	03	00	0	0	999	000	2	0
41	13.09.10	1	00	00	00	0	0	000	000	0	0
41	13.09.10	2	00	00	00	0	0	000	000	0	0
41	13.09.10	3	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
41	13.09.10	4	00	00	00	0	0	000	000	0	0
41	13.09.10	5	08	00	63	0	2	999	000	0	0
41	13.09.10	6	08	00	63	0	2	999	000	0	0
41	13.09.10	7	08	00	63	0	2	999	000	0	0
41	13.09.10	8	00	00	00	0	0	000	000	0	0
41	13.09.10	9	18	00	00	0	2	500	000	0	0
41	13.09.10	10	00	00	00	0	0	000	000	0	0
41	13.09.10	11	00	00	00	0	0	000	000	0	0
41	13.09.10	12	00	00	00	0	0	000	000	0	0
41	13.09.10	13	08	00	52	0	2	999	000	0	0
41	13.09.10	14	18	00	00	0	2	500	000	0	0
41	13.09.10	15	00	00	00	0	0	000	000	0	0
41	13.09.10	16	00	00	00	0	0	000	000	0	0
41	13.09.10	17	00	00	00	0	0	000	000	0	0
41	13.09.10	18	00	00	00	0	0	000	000	0	0
41	13.09.10	19	08	00	52	0	2	999	000	0	0
41	13.09.10	20	00	00	00	0	0	000	000	0	0
41	13.09.10	21	00	00	00	0	0	000	000	0	0
41	13.09.10	22	00	00	00	0	0	000	000	0	0
41	13.09.10	23	08	00	52	0	2	999	000	0	0
41	13.09.10	24	08	00	63	0	2	999	000	0	0
42	10.09.10	1	00	00	00	0	0	000	000	0	0
42	10.09.10	2	00	00	00	0	0	000	000	0	0
42	10.09.10	3	00	00	00	0	0	000	000	0	0
42	10.09.10	4	00	00	00	0	0	000	000	0	0
42	10.09.10	5	00	00	00	0	0	000	000	0	0
42	10.09.10	6	00	00	00	0	0	000	000	0	0
42	10.09.10	7	00	00	00	0	0	000	000	0	0
42	10.09.10	8	00	00	00	0	0	000	000	0	0
42	10.09.10	9	00	00	00	0	0	000	000	0	0
42	10.09.10	10	00	00	00	0	0	000	000	0	0
42	10.09.10	11	00	00	00	0	0	000	000	0	0
42	10.09.10	12	00	00	00	0	0	000	000	0	0
42	10.09.10	13	00	00	00	0	0	000	000	0	0
42	10.09.10	14	00	00	00	0	0	000	000	0	0
42	10.09.10	15	00	00	00	0	0	000	000	0	0
42	10.09.10	16	00	00	00	0	0	000	000	0	0
42	10.09.10	17	00	00	00	0	0	000	000	0	0
42	10.09.10	18	00	00	00	0	0	000	000	0	0
42	10.09.10	19	00	00	00	0	0	000	000	0	0
42	10.09.10	20	00	00	00	0	0	000	000	0	0
42	10.09.10	21	00	00	00	0	0	000	000	0	0
42	10.09.10	22	00	00	00	0	0	000	000	0	0
42	10.09.10	23	00	00	00	0	0	000	000	0	0
42	10.09.10	24	00	00	00	0	0	000	000	0	0
43	09.09.10	1	00	00	00	0	0	000	000	0	0
43	09.09.10	2	00	00	00	0	0	000	000	0	0
43	09.09.10	3	00	00	00	0	0	000	000	0	0
43	09.09.10	4	00	00	00	0	0	000	000	0	0
43	09.09.10	5	00	00	00	0	0	000	000	0	0
43	09.09.10	6	00	00	00	0	0	000	000	0	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
43	09.09.10	7	00	00	00	0	0	000	000	0	0
43	09.09.10	8	00	00	00	0	0	000	000	0	0
43	09.09.10	9	00	00	00	0	0	000	000	0	0
43	09.09.10	10	00	00	00	0	0	000	000	0	0
43	09.09.10	11	00	00	00	0	0	000	000	0	0
43	09.09.10	12	00	00	00	0	0	000	000	0	0
43	09.09.10	13	00	00	00	0	0	000	000	0	0
43	09.09.10	14	00	00	00	0	0	000	000	0	0
43	09.09.10	15	00	00	00	0	0	000	000	0	0
43	09.09.10	16	00	00	00	0	0	000	000	0	0
43	09.09.10	17	00	00	00	0	0	000	000	0	0
43	09.09.10	18	00	00	00	0	0	000	000	0	0
43	09.09.10	19	00	00	00	0	0	000	000	0	0
43	09.09.10	20	00	00	00	0	0	000	000	0	0
43	09.09.10	21	00	00	00	0	0	000	000	0	0
43	09.09.10	22	00	00	00	0	0	000	000	0	0
43	09.09.10	23	00	00	00	0	0	000	000	0	0
43	09.09.10	24	00	00	00	0	0	000	000	0	0
44	17.09.10	1	14	03	00	0	0	999	000	3	0
44	17.09.10	2	14	03	00	0	0	999	000	3	0
44	17.09.10	3	14	03	00	0	0	999	000	3	0
44	17.09.10	4	14	03	00	0	0	999	000	3	0
44	17.09.10	5	14	03	00	0	0	999	000	3	0
44	17.09.10	6	14	03	00	0	0	999	000	3	0
44	17.09.10	7	14	03	00	0	0	999	000	3	0
44	17.09.10	8	14	03	00	0	0	999	000	3	0
44	17.09.10	9	14	03	00	0	0	999	000	3	0
44	17.09.10	10	14	03	00	0	0	999	000	3	0
44	17.09.10	11	14	03	00	0	0	999	000	3	0
44	17.09.10	12	14	03	00	0	0	999	000	3	0
44	17.09.10	13	14	03	00	0	0	999	000	3	0
44	17.09.10	14	14	03	00	0	0	999	000	3	0
44	17.09.10	15	14	03	00	0	0	999	000	3	0
44	17.09.10	16	14	03	00	0	0	999	000	3	0
44	17.09.10	17	14	03	00	0	0	999	000	3	0
44	17.09.10	18	14	03	00	0	0	999	000	3	0
44	17.09.10	19	14	03	00	0	0	999	000	3	0
44	17.09.10	20	14	03	00	0	0	999	000	3	0
44	17.09.10	21	14	03	00	0	0	999	000	3	0
44	17.09.10	22	14	03	00	0	0	999	000	3	0
44	17.09.10	23	14	03	00	0	0	999	000	3	0
44	17.09.10	24	14	03	00	0	0	999	000	3	0
45	08.09.10	1	14	03	00	0	0	999	000	2	0
45	08.09.10	2	14	03	00	0	0	999	000	2	0
45	08.09.10	3	14	03	00	0	0	999	000	2	0
45	08.09.10	4	14	03	00	0	0	999	000	2	0
45	08.09.10	5	14	03	00	0	0	999	000	2	0
45	08.09.10	6	14	03	00	0	0	999	000	2	0
45	08.09.10	7	14	03	00	0	0	999	000	1	0
45	08.09.10	8	14	03	00	0	0	999	000	1	0
45	08.09.10	9	14	03	00	0	0	999	000	2	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
45	08.09.10	10	14	03	00	0	0	999	000	2	0
45	08.09.10	11	14	03	00	0	0	999	000	3	0
45	08.09.10	12	14	03	00	0	0	999	000	3	0
45	08.09.10	13	14	03	00	0	0	999	000	2	0
45	08.09.10	14	14	03	00	0	0	999	000	2	0
45	08.09.10	15	14	03	00	0	0	999	000	2	0
45	08.09.10	16	14	03	00	0	0	999	000	2	0
45	08.09.10	17	14	03	00	0	0	999	000	2	0
45	08.09.10	18	14	03	00	0	0	999	000	2	0
45	08.09.10	19	14	03	00	0	0	999	000	2	0
45	08.09.10	20	14	03	00	0	0	999	000	1	0
45	08.09.10	21	14	03	00	0	0	999	000	2	0
45	08.09.10	22	14	03	00	0	0	999	000	2	0
45	08.09.10	23	14	03	00	0	0	999	000	2	0
45	08.09.10	24	14	03	00	0	0	999	000	2	0
46	09.09.10	1	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	2	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	3	14	11	50	0	0	300	dryolis	1	0
46	09.09.10	4	14	11	50	0	0	300	dryolis	1	0
46	09.09.10	5	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	6	14	11	50	0	0	300	dryolis	3	0
46	09.09.10	7	14	11	50	0	0	300	dryolis	1	0
46	09.09.10	8	14	11	50	0	0	300	dryolis	1	0
46	09.09.10	9	14	11	50	0	0	300	dryolis	1	0
46	09.09.10	10	14	11	50	0	0	300	dryolis	1	0
46	09.09.10	11	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	12	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	13	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	14	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	15	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	16	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	17	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	18	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	19	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	20	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	21	14	11	50	0	0	300	dryolis	1	0
46	09.09.10	22	14	11	50	0	0	300	dryolis	1	0
46	09.09.10	23	14	11	50	0	0	300	dryolis	2	0
46	09.09.10	24	14	11	50	0	0	300	dryolis	3	0
47	13.09.10	1	14	02	00	0	0	999	000	2	0
47	13.09.10	2	14	02	00	0	0	999	000	1	0
47	13.09.10	3	14	02	00	0	0	999	000	3	0
47	13.09.10	4	14	02	00	0	0	999	000	1	0
47	13.09.10	5	14	02	00	0	0	999	000	1	0
47	13.09.10	6	14	02	00	0	0	999	000	1	0
47	13.09.10	7	14	02	00	0	0	999	000	1	0
47	13.09.10	8	14	02	00	0	0	999	000	2	0
47	13.09.10	9	14	02	00	0	0	999	000	1	0
47	13.09.10	10	14	02	00	0	0	999	000	2	0
47	13.09.10	11	14	02	00	0	0	999	000	1	0
47	13.09.10	12	14	02	00	0	0	999	000	1	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
47	13.09.10	13	14	02	00	0	0	999	000	2	0
47	13.09.10	14	14	02	00	0	0	999	000	2	0
47	13.09.10	15	14	02	00	0	0	999	000	2	0
47	13.09.10	16	14	02	00	0	0	999	000	3	0
47	13.09.10	17	14	02	00	0	0	999	000	3	0
47	13.09.10	18	14	02	00	0	0	999	000	2	0
47	13.09.10	19	14	02	00	0	0	999	000	2	0
47	13.09.10	20	14	02	00	0	0	999	000	2	0
47	13.09.10	21	14	02	00	0	0	999	000	2	0
47	13.09.10	22	14	02	00	0	0	999	000	1	0
47	13.09.10	23	14	02	00	0	0	999	000	1	0
47	13.09.10	24	14	02	00	0	0	999	000	1	0
48	11.09.10	1	13	02	00	12	0	999	000	1	0
48	11.09.10	2	13	02	00	12	0	999	000	1	0
48	11.09.10	3	13	02	00	11	0	999	000	1	0
48	11.09.10	4	13	02	00	12	0	999	000	1	0
48	11.09.10	5	13	02	00	11	0	999	000	1	0
48	11.09.10	6	13	02	00	11	0	999	000	1	0
48	11.09.10	7	13	02	00	11	0	999	000	2	0
48	11.09.10	8	13	02	00	11	0	999	000	2	0
48	11.09.10	9	13	02	00	11	0	999	000	2	0
48	11.09.10	10	13	02	00	11	0	999	000	2	0
48	11.09.10	11	13	02	00	12	0	999	000	2	0
48	11.09.10	12	13	02	00	11	0	999	000	2	0
48	11.09.10	13	13	02	00	12	0	999	000	1	0
48	11.09.10	14	13	02	00	11	0	999	000	2	0
48	11.09.10	15	13	02	00	11	0	999	000	2	0
48	11.09.10	16	13	02	00	11	0	999	000	2	0
48	11.09.10	17	13	02	00	11	0	999	000	2	0
48	11.09.10	18	13	02	00	12	0	999	000	2	0
48	11.09.10	19	13	02	00	12	0	999	000	1	0
48	11.09.10	20	13	02	00	12	0	999	000	2	0
48	11.09.10	21	13	02	00	12	0	999	000	1	0
48	11.09.10	22	13	02	00	12	0	999	000	2	0
48	11.09.10	23	13	02	00	12	0	999	000	2	0
48	11.09.10	24	13	02	00	11	0	999	000	2	0
49	11.09.10	1	14	02	00	0	0	999	000	2	0
49	11.09.10	2	14	02	00	0	0	999	000	2	0
49	11.09.10	3	14	02	00	0	0	999	000	2	0
49	11.09.10	4	14	02	00	0	0	999	000	2	0
49	11.09.10	5	14	02	00	0	0	999	000	2	0
49	11.09.10	6	14	02	00	0	0	999	000	2	0
49	11.09.10	7	14	02	00	0	0	999	000	1	0
49	11.09.10	8	14	02	00	0	0	999	000	2	0
49	11.09.10	9	14	02	00	0	0	999	000	1	0
49	11.09.10	10	14	02	00	0	0	999	000	1	0
49	11.09.10	11	14	02	00	0	0	999	000	2	0
49	11.09.10	12	14	02	00	0	0	999	000	2	0
49	11.09.10	13	14	02	00	0	0	999	000	1	0
49	11.09.10	14	14	02	00	0	0	999	000	2	0
49	11.09.10	15	14	02	00	0	0	999	000	2	0

Tačka/ Point	Datum merenja/ Date of observation	R.br. Stabla/ No. of tree	Specifikacija pogodjenog dijela /Specification	Simptom/ Symptom	Specifikacija simptoma / Specification of symptom	Lokacija u krošnji / Location in the crown	Starost oštećenja/ Age of damage	Uzrok / Cause	Naučni naziv uzroka / Sci. Name causes	Intenzitet napada/ Intensity of attack	Druga zapažanja/ Other
49	11.09.10	16	14	02	00	0	0	999	000	2	0
49	11.09.10	17	14	02	00	0	0	999	000	2	0
49	11.09.10	18	14	02	00	0	0	999	000	2	0
49	11.09.10	19	14	02	00	0	0	999	000	2	0
49	11.09.10	20	14	02	00	0	0	999	000	2	0
49	11.09.10	21	14	02	00	0	0	999	000	2	0
49	11.09.10	22	14	02	00	0	0	999	000	2	0
49	11.09.10	23	14	02	00	0	0	999	000	1	0
49	11.09.10	24	14	02	00	0	0	999	000	2	0

PRAĆENJE STANJA OŠTEĆENOSTI ŠUMA U CRNOJ GORI PREMA PROGRAMU ICP ZA ŠUME

(Međunarodni kooperacioni program za praćenje stanja šuma Evrope)
Godišnji izvještaj za 2010. godinu

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(International Cooperative Programme on Monitoring Forest Condition in Europe)
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