Identifying, Managing, and Monitoring of High Conservation Value Forests in Bulgaria

Practical guide

Updated version, February 2016

Prepared with the active support of ProForest on behalf of the WWF and IKEA Co-operation on Forest Projects. The updated version of the guide was prepared in the period 2014 -2016 with the support of WWF and the working group for development for national FSC Standard for Bulgaria within a partnership of WWF and IKEA

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INTRODUCTION

WHAT ARE HIGH CONSERVATION VALUES AND HIGH CONS[1]ERVATION VALUE FORESTS?

Modern understanding of forest as a multi functional system, including ecological, social, economic, aesthetic and other functions needs broader reflection of its values in national and world legislation and increasing number of initiatives and activities for its management.
The idea of High Conservation Value Forests (HCVFs) was developed by the Forest Stewardship Council (FSC) and first published in 1999. This concept moves the forestry debate away from definitions of particular forest types (e.g. primary, old growth forests) or methods of timber harvesting (e.g. industrial logging) to **focus on the values that make a forest important**. By identifying these key values and ensuring that they are maintained or enhanced, it is possible to make rational management decisions that are consistent with the maintenance of important environmental and social values.

The key to the concept of HCVFs is the identification of High Conservation Values (HCVs). The international definitions of HCVs are given in Table 1. HCVs are values that are important and need to be protected. High conservation value forests are forest territories (incl. territories without forest cover such as lakes in the forests, forest meadows, etc.) with high conservation values. Having identified HCVs, the forest manager should plan management in such a way as to maintain or enhance the identified HCVs and to put in place a monitoring programme to check that this is being achieved.

Table 1: Definition of High Conservation Value Forests

High Conservation Value (HCV): Any of the following values:

- HCV1: Species Diversity. Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels.
- HCV 2: Landscape-level ecosystems and mosaics. Intact Forest Landscapes, large landscape-level ecosystems and ecosystem mosaics that are significant* at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.
- HCV 3: Ecosystems and habitats. Rare, threatened, or endangered ecosystems, habitats or refugia.
- HCV 4: Critical ecosystem services. Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.
- HCV 5: Community needs. Sites and resources fundamental for satisfying the basic necessities of local communities or Indigenous Peoples (for example for livelihoods, health, nutrition, water), identified through engagement with these communities or Indigenous Peoples.
- HCV 6: Cultural values. Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or Indigenous Peoples, identified through engagement with these local communities or Indigenous Peoples.

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According to the definitions given in the International Generic Indicators of FSC, 2015

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High conservation value forests (HCVF) Forest areas that have at least one of the six high conservation values as defined by FSC. (See the above definition for HCV)

Apart from its use in forest certification, the HCVF approach is increasingly being used for mapping, forest and landscape management and conservation decision-making approaches to forest resources. It is also being used in purchasing policies of timber companies or companies producing wood products. The HCVF approach recently has begun to appear in discussions and policies of government agencies.

WHAT IS THE HCVF TOOLKIT?

The High Conservation Value Forests (HCVF) Toolkit provides a practical methodology to be used on a routine basis to identify High Conservation Value Forests (HCVF). It also provides guidance on the types of management and monitoring that are necessary if such a forest has been identified.

After a discussion about identification of national High Conservation Values and their finalization, a number of potential uses of this toolkit will be found:

a. Use by forest managers to meet standards related to HCVF

Forest managers can carry out evaluations on their forest areas to determine whether any of the defined HCVs are present within their forest management unit (FMU). Forest managers can integrate HCV identification and management into their overall forest management planning and activities. In order to fully implement certification requirements related to HCVF, HCVs should become an important element of baseline information collection and impact assessment, management planning, implementation of operations and monitoring.

b. Use by certifiers assessing HCVF

The defined national HCVs, together with management guidance, should form the HCVF element of national forest management certification standards. This would depend on the conclusions that have a broad support from a wide range of stakeholders and that have been the subject of an inclusive consultation process, according to the rules of the certification scheme.

Certifiers would also utilise the defined national set of HCVs for carrying out assessments in the evaluation of compliance with certification requirements of specific FMUs.

c. Use by landscape planners trying to prioritise different landuses and by forestry planners

Based on information that is already available or is being collected, the defined national HCVs can be used to draw up landscape-level plans and maps to show actual or potential HCVF. Such maps could then be used to inform and prioritise district and regional spatial and land-use planning decisions and conservation planning, and the development of forestry projects and plans.

d. Use by purchasers implementing policies related to HCVF

Purchasers implementing HCVF policies can utilise information about the presence of HCVs, or use the nationally defined sets of HCVs to undertake evaluations of the presence of HCVs in specific FMUs, or in setting precautionary purchasing policies. Examples could be given with big companies like IKEA, Cronospan, Fratti, CareFor, OBI, etc., which base their international timber supply policies on the HCVF methodology.

The use of this guide requires some knowledge of the conservation and social issues, which constitute the High Conservation Values. Toolkit users must evaluate whether local forest areas are exceptional – in terms of ecological and social importance. This will require an understanding of the uniqueness of forest areas and their trends and threats to their resources. It is very important that toolkit users communicate with regional, national and international experts (scientists - foresters, biologists, ecologists, sociologists, research institutions, NGOs) to evaluate the importance of a particular forest area.

This HCVF Toolkit has been developed to help interested parties understand the HCVF concept and conduct an HCVF evaluation. It will also help to ensure more consistent interpretation of the concept within

Bulgaria. The Toolkit has not been developed by FSC and thus should not be considered as an official FSC policy or guidance. The updated in 2016 version was made an Annex of the National FSC standard for Bulgaria.

HOW WAS THE BULGARIAN HCVF TOOLKIT DEVELOPED?

The Bulgarian Toolkit uses a format similar to a Global Toolkit developed by ProForest. The Global Toolkit was created to help drafting groups develop guidance on HCVF at a national level. The Global Toolkit is expected to guide the development of national toolkits in many countries all over the world. Proforest and the WWF Danube-Carpathian Programme (DCP) organized a meeting in May 2003 in Sofia to discuss the Global Toolkit. The meeting was attended by representatives from the National Forestry Board at the Ministry of Agriculture and Forests, of the National Nature Protection Service at the Ministry of Environment and Water, as well as by representatives of international forestry projects and non-governmental organizations working in the field of forest management and nature conservation in Bulgaria.

The toolkit interprets high conservation values identified in the FSC's forest management Principle Nine (see Table I above) within the context of Bulgarian conditions and has created specific High Conservation Values appropriate within the country.

During the development of the draft national toolkit, the Global Toolkit was analysed for its consistence with the operative national legislation and existing forestry practices in Bulgaria. The analysis was carried out by two Bulgarian experts and together with the Global Toolkit it was used by the working group as a main source of information. Materials were used from sociological studies and also from statistical research works, carried out by other forestry and social projects. The Institute of the Monuments of Culture, the Institute of Ethnography and the Institute of Archaeology provided data and maps. Inquiries were submitted to the Holy Synod - Sofia, the Head Office of the Mufti and to the Catholic Church in Bulgaria.

The working group established for the development of the draft HCVF Toolkit includes experts in forest management, experts in the social field, biodiversity and certification experts, forestry experts, experts in forest fires and erosion. The working group includes also representatives of the National Forestry Board, Ministry of Environment and Water, Institute of Forests, Faculty of Biology to the Sofia University, Vitosha Nature Park Directorate, Green Balkans, Balkani Wildlife Society, Bulgarian Society for the Protection of Birds, German-Bulgarian Forest Project, Bulgarian-Swiss Biodiversity Conservation Programme, ProForest, World Wide Fund for Nature, etc. Some of the working group members have participated in the development of the Bulgarian Forest Certification Standard.

The identified HCVs and the toolkit methodology were field-tested in the autumn of 2004(State game breeding station Rakitovo), and also during the real forest management certification process according to FSC scheme in the spring of 2005 (Dospat SFU and Borika Private Cooperative, Stoikite village). A broad consultation process was carried out and the draft toolkit was represented in front of a wide range of forest experts and stakeholders. The team collected the opinions, comments, recommendations or additions from as biggest as possible number of stakeholders, in order to incorporate them into the form and contents of the national toolkit. The Toolkit was coordinated with National Forestry Board (NFB), which is the body responsible for the forest management of state forests and the control over forest activities in the country. For this purpose in the National Forestry Board was created a expert working group, who will adapt the toolkit to the practises and forest administration in the country.

The structure and content of the National Toolkit are in compliance with the received consultation materials, so that it is as complete as possible and suitable for the country conditions and for use in everyday forestry practices.

In the autumn of 2005 the finalized Toolkit was presented on a Public national meeting/workshop aiming its popularisation among as much as possible stakeholders and its faster implementation in practise.

Once implemented in practise The Toolkit will be updated regularly according to the enhancement of different forest practises and legislation.

Last update of certain elements mainly in Section HCV 6, and in the Annexes and Lists of Species to the Toolkit has been undertaken in the period August 2014 – February 2016. The proposals have been developed by experts from the Bulgarian Academy of Sciences and by professionals in the field of tourism and social development with the support of WWF Danube Carpathian Programme Bulgaria. The Toolkit is included as an annex to the national FSC Standard for Bulgaria. The lists referring to HCV 2 are yet to be updated.

The national toolkit for identification, management and monitoring of HCVF is available for all stakeholders, it can be provided by WWF DCP Bulgaria office: Sofia 1421 Tzanko Tzerkovski 67, A, 3; tel: +359 2 964 05 46, fax: + 359 2 964 05 45; e-mail: office@wwfdcp.bg; fcic@wwfdcp.bg or www.wwfdcp.bg.

A copy from the National Toolkit can be found in any NFB office – State Forestry Units (SFU) or Game breeding stations in the country, as well as in the Ministry of water and environment units – RIEW in the country or from the Environmental NGOs.

USING THE TOOLKIT

The toolkit includes one chapter for each of the six types of High Conservation Values, as well as an appendix. Each chapter begins with an introduction (including the FSC definition of the value) and a list of the relevant components of the high conservation value for Bulgaria. These are the values that users must examine within the context of a forest management area.

Each component consists of a discussion, rationale and instructions/guidance to users on the identification of the value's presence and on managing and monitoring the forest resource to maintain the value. These sections form the heart of the HCVF toolkit.

1. Rationale

The rationale provides background and justification as to why a particular attribute is considered of high conservation value. Further on, the rationale lists the specific types of forests or forest uses that should be considered as a HCV.

2. Identifying the Presence of a HCV

The toolkit includes an evaluation methodology for each component and its applicability within a forest management unit. Toolkit users are asked to compile information or answer questions that can be examined using government and forest management planning documents, maps and satellite images, knowledge of the trends and threats to forest resources, and consultations with local communities and other stakeholders.

The identification process and task depends on the complexity of each component. For components that are relatively simple to evaluate, the toolkit includes a description of an appropriate task to make this determination.

However, for many components (e.g. HCVs 5&6) the evaluation process will be more complicated, timely, and possibly costly. In these cases, the toolkit has divided the process into preliminary and full assessments. For social values, a threshold is introduced for determining if a value is fundamental or critical to the well being of local communities.

The *preliminary assessment* is a simple methodology to see if HCVs are likely to occur or not. This acts as a coarse filter, rapidly excluding all forests that definitely do not contain HCVs, and identifying forests that potentially contain specific HCVs. The preliminary assessment should be straightforward enough to be undertaken by people without special knowledge of biological or social sciences (e.g. forest managers and timber purchasers). The preliminary assessment is usually in the form of a "yes or no" question and asks

about the presence of certain values. For example, a preliminary assessment may ask users to identify if communities or protected areas exist nearby an examined FMU. If the answer to the preliminary question is yes, then the toolkit user will need to conduct a more complete or *full assessment* of the value. Preliminary assessments often utilize maps and other information that can be easily accessed by forest managers. If a toolkit user determines that a forest area does not exhibit the specific characteristics, then this HCV does not need to be further examined.

The *full assessment* is a more time-consuming methodology identifying in detail what the potential HCVs are, or clarifying that there are no HCVs. This is a more thorough examination of the characteristics of a forest area or forest use and requires more information and expertise. A full assessment will usually require that the toolkit user contacts relevant experts and stakeholders and/or conducts specific research and consultations.

THRESHOLDS AND IDENTIFICATION OF SOCIAL HIGH CONSERVATION VALUES (HCVs 5 & 6)

The economic situation of the country for the past 13 years has turned forests into the main source of subsistence for the local people in many forest areas. Apart from the other services, forests play an important social function in mountainous regions. Forest resources are a main source of livelihood and income for most of the people living in the Rhodope, Balkan and Strandja Mountains. Non-material benefits from the forests are of no minor importance. Almost one third of the country area is covered with forests – a fact entailing a narrow relationship between people and forests. It has lasted for thousands of years and has had a strong impact on the culture, history and spiritual values of Bulgarian people. A substantial part of Bulgarian history and knowledge is related to forests and their landscapes. These relations vary greatly in different regions and among different cultural groups in Bulgaria. It is very difficult to determine which uses and traditions are critical and which are not. Inevitably, an attempt to develop specific national HCVs in as dynamic and fast changing country as Bulgaria will fail, because the identified values would be appropriate in some areas or time periods and irrelevant or incomplete in others.

Thus, a modified process is used to identify HCVs 5 & 6. Specific components have not been identified as in the other sections of the toolkit. Instead, the toolkit provides examples of *values* and *thresholds* to help toolkit users determine when the relationship between forest areas and local communities is strong enough to be considered a HCV.

Thresholds are created to help understand the basic HCV definitions within the specific Bulgarian context. When is a forest fundamental to a local community's well being? When is a forest area critical to community's culture? Thresholds can be either quantitative or qualitative.

The process of identifying relevant social values utilizes three-steps - a preliminary assessment, full assessment, and threshold evaluation. In other sections of the toolkit, if a forest area exhibits an identified value, the forest is considered a HCVF. However, as social values will be frequently applicable in Bulgaria, the toolkit user must evaluate whether the forest area is critical to maintaining the value. For example, if a community utilizes local forest areas for the production of fodder for animal breeding, the threshold questions help evaluate how much communities rely on the forest as a source of fodder and pasture.

The thresholds are questions that are examined as part of the consultative process with local communities and that are strongly linked to the information necessary to complete the full assessment of these values.

Thus the process of identifying social values will be:

Preliminary Assessment Questions: If relevant ⇒ Full Assessment Questions: If relevant ⇒ Threshold Analysis: Meets Threshold Criteria ⇒ HCV Identified

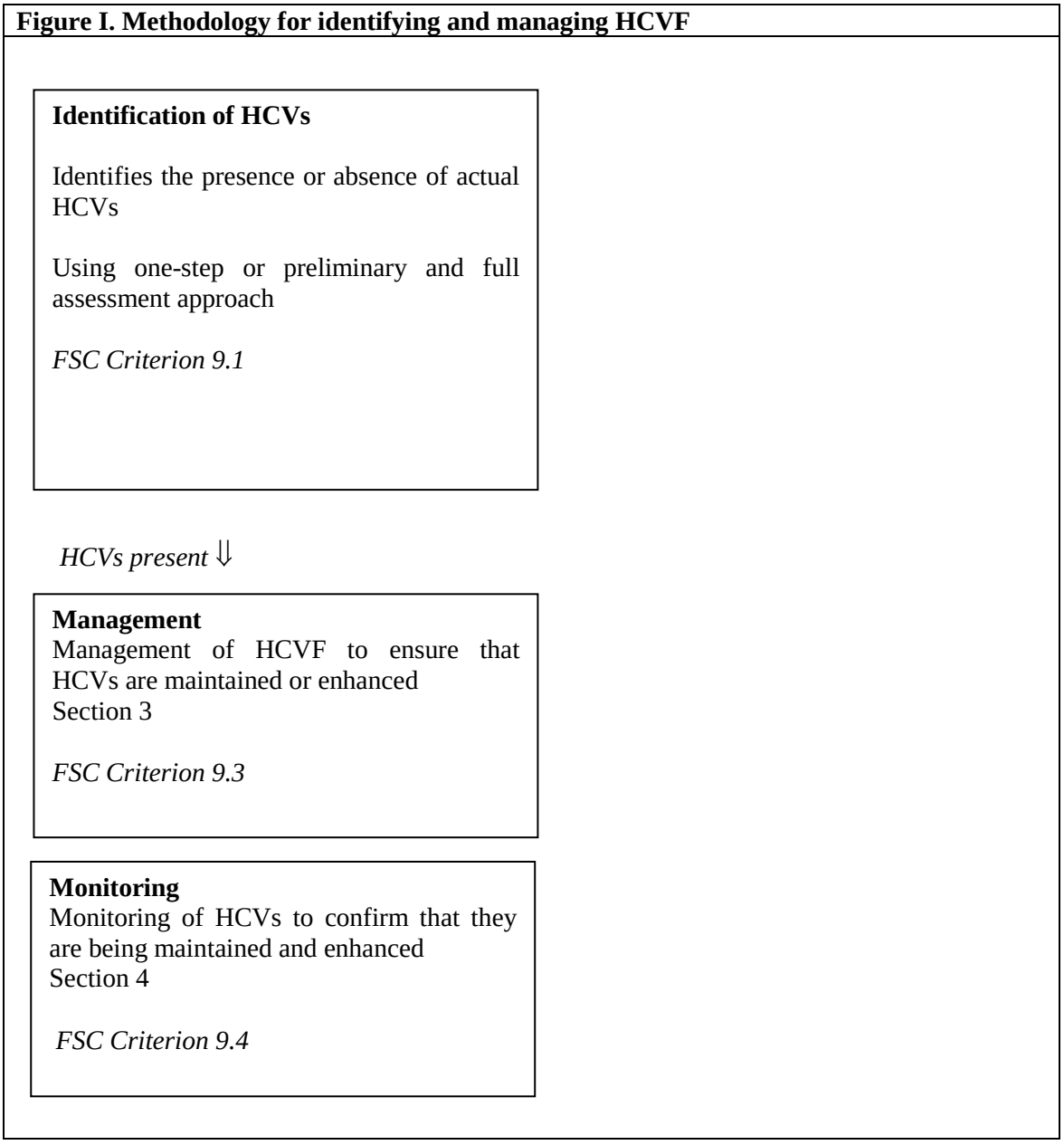
The toolkit drafting team has developed the social section on the base of existing studies and members' experience in numerous regions of the country. However, it is likely that the toolkit examples do not identify all types of potential HCV. Thus, this toolkit should be used as a guide to direct the HCV identification process and should be gradually developed with time. **It is critical that toolkit users consult with local communities and other forest users on how each community values a forest area.**

3. Recommendations for managing, protection and monitoring of values

If, after fully evaluating the relevance of a particular value, the examined value is not relevant, no further action is necessary. If a value/component is relevant to the FMU, then the manager must take steps to make the necessary changes to ensure the protection, management and monitoring of the value. See Figure I below.

Recommendations are included to help toolkit users develop action plans (strategies) to maintain the high conservation values present within a forest area. Recommendations are brief and are meant to guide users on the types of information and consultations necessary to develop effective planning and monitoring programs. However, the recommendations are insufficient on their own, as a resource to provide detailed guidance and are not meant as standard operating procedures. The directions for HCV identification given in the toolkit refer to all forest areas within the country and to all types of forest ownership.

Figure I. Methodology for identifying and managing HCVF



For additional information regarding the toolkit development, please contact World Wide Fund for Nature, Danube-Carpathian Programme, Bulgaria:
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KEYS TO HCVF SUCCESS

CONSULTING EXPERTS AND DEVELOPING PARTNERSHIPS

The HCVF toolkit requires users to identify HCVs that cover a wide range of ecological, environmental, and social issues and requires an understanding of regional biodiversity issues, animal and plant ranges and behaviour, water and soil resources, ecosystem health, anthropology, and local economy. It is very likely that toolkit users will not have all of the expertise necessary to evaluate these issues alone. The toolkit process is highly reliant upon the input of local and national expert organizations and individuals.

The working group has tried to present information in a simple way and to make the toolkit as user-friendly as possible. Anyway, users should consult with experts during HCV identification and while developing management and monitoring techniques. In a number of cases, when toolkit users don't have the relevant education, these experts should provide the key inputs as to whether a forest area/forest type should be considered critical, threatened, etc. External experts and organizations will also be able to provide input on the status of forest types and of rare, threatened and endangered species, and help design management strategies to ensure the maintenance or enhancement of high conservation values.

Who are the regional and national experts? The drafting group itself includes representatives of various organizations, which could help toolkit users in practice. There are also other relevant organizations and scientific institutions. A special Appendix to the final toolkit will list the organizations that can provide information on communities and nature conservation in the country. The more relevant and reliable experts users consult and collaborate with, the greater the likelihood that good decisions will be taken.

PRECAUTIONARY APPROACH

An important component of HCVFs management is the application of the Precautionary Approach. HCVFs are, by definition, the most important forests from a conservation or social perspective (depending on the identified HCVs). Therefore, it is critically important that the identified values are not lost. But with the current level of knowledge about forests and their functions, it is not always possible to be sure that a particular management strategy will be suitable in all cases. Therefore, it is essential to use the precautionary approach when dealing with HCVFs.

In practice this means: "Planning, management and monitoring of the attributes that make a forest management unit a HCVF should be based on existing scientific and indigenous/traditional knowledge, to ensure that these attributes do not come under threat of significant reduction or loss and that any threat of reduction or loss is detected long before the reduction becomes irreversible. In case a threat has been identified, early preventive actions, including halting the existing actions, should be taken to avoid or minimise such a threat, even if the causes and effects of the threat are not scientifically confirmed" (FSC Principle 9 Advisory Panel, 2000).

The precautionary approach operates both when identifying HCVs and when managing already identified HCVs, e.g.:

- ***Assessing the presence of HCVFs***: where doubt exists as to whether an attribute, or collection of attributes, are sufficient to signify HCVs, then the forest manager should treat these attributes as HCVs, until information proves otherwise. This should occur when toolkit users and regional and national experts lack sufficient information to make an informed judgement. Examples of forests that might not appear valuable at first include fire damaged or logged areas that host important and endangered large carnivore species like the bear, wolf or others.

- ***Managing and monitoring HCVs***: where doubt exists as to the appropriate management of the HCV, management should include treatments to the HCV at a scale and intensity that does not threaten the HCV, prior to the application of the specific management approach within the whole forest management unit.

The precautionary approach has been incorporated into the methodology for identifying HCVs and should also form an important basis for any management regime and monitoring programme. For example:

- In case that existing forest management practices do not maintain or enhance identified HCVs, they should be altered and stringent safeguards should be placed in compliance with the operative Forests Act, Biological Diversity Act, Protected Areas Act or even more stringent requirements should be placed, if needed. In FMUs, located in HCVF, may need to reduce harvest intensities, create additional or larger conservation zones within production forest areas, and protect areas not currently protected.
- If communities rely upon a forest or a forest area for clean water supply or other such use, it is a HCVF. Any decisions on forest use should take this fact into consideration and should be made with genuine input from the interested community. Co-management and co-monitoring of production operations might be relevant. The communities are not restricted to those within the FMU; all communities are included, whose water supply depends on the particular forest area.
- If you are unsure whether a HCVF area can be logged or if it should be zoned as a conservation set-aside, put it into the set-aside until you have shown beyond doubt that the proposed harvesting regime will not harm the future of the forest. This will require detailed study of the area and development of location-specific management rules.

HCV1. Species Diversity. Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels.

INTRODUCTION

This HCV pertains to FMU's management assessment in connection with biodiversity protection in a general way. This assessment refers to influence over species as influence over ecosystems and their functioning.

In the Bulgarian context this toolkit has identified the following components:

1.1 Protected Areas
1.2 Threatened, endangered and endemic species
1.3 Critical concentrations of species

HCV1.1 PROTECTED AREAS AND ZONES

RATIONALE

Protected areas (PA) are a vital component of biodiversity conservation. The identification of HCVFs included in protected areas can be easily done according to the operative national legislation. In Bulgaria a special Protected Areas Act (PAA) was enforced in 1998. It arranges the categories of protected areas in Bulgaria, their purpose, regimes of protection and use, and their management. The different ownership, regimes and uses in these areas, the different responsible and management bodies, have resulted in the establishment of six protected areas' categories according to the Bulgarian legislation. Currently the total area of protected areas in Bulgaria covers about 5% of the country. The correlation between categories set by PAA and the IUCN categories of protected areas is given in table 2:

Table 2

PAA Categories	Definition of the category according to PAA	IUCN Categories

Reserve	Model natural ecosystems, including characteristic and/or unique wild plant and animal species and their habitats.	I (II)
National Park	Areas having no settlements within their boundaries and including natural ecosystems with a rich diversity of plant and animal species, characteristic and unique landscapes and sites of non-living nature.	II (V)
Nature Site	Characteristic or unique sites of non-living nature, such as rock formations of scientific value, earth pyramids, caves, pot-holes, waterfalls, deposits of fossils and minerals, sand dunes and others, which possess extraordinary values because of their rarity, representativeness, aesthetic beauty or importance for science and culture.	III (V)
Managed Reserve	Ecosystems including rare and/or endangered wild plant and animal species and habitats.	IV
Nature Park	Areas including various ecosystems with diverse plant and animal species and habitats, with characteristic and unique landscapes and sites of non-living nature.	V (VI)
Protected Area	1. Areas with characteristic and unique landscapes, including landscapes of people living in harmony with nature; 2. Habitats of endangered, rare or vulnerable plant and animal species and habitats.	VI, III

Since 2007, with the accession of Bulgaria to the European Union, our country became part of the European ecological network Natura 2000. Natura 2000 is a Pan-European network made up of protected zones designed to provide long-term survival of the most valuable and threatened species and habitats of Europe in line with basic international agreements in the field of environmental protection and biodiversity. Ecological network was established on the basis of two European directives: Directive 92/43 / EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Directive 2009/147 / EC on the conservation of wild birds (Birds Directive). These two European Directives were transposed into national legislation by the Biodiversity Act (2002). The national ecological network (part of Natura 2000) consisting of protected zones is covering approximately 34% of the territory. Over 75% of the protected Natura 2000 zones fall within forests and forest areas.

The size, distribution, condition and threats to protected areas will affect decisions on thresholds concerning other HCVs, as discussed later in this document.

DEFINITION, CRITERIA AND THRESHOLD

In Bulgaria HCVs are all protected areas and zones, as follows:

1. **Lands and forests from the forest fund (LFFF) in reserves, managed reserves, national parks, protected areas, nature sites designated under the PAA;**
2. **LFFF in nature parks included in biodiversity conservation areas, designated under management plans or park management plans;**
3. **LFFF in nature parks without management documents;**
4. **LFFF included in protected areas designated under the Biological Diversity Act (BDA).**

IDENTIFICATION OF HCV 1.1

The presence of all designated protected areas in FMU that could be affected by forestry operations should be specified. This information, as information refers to relevant management plans is available from:

- National Nature Protection Service at the Ministry of Environment and Water
- "Protected Areas, International Cooperation and Relations with NGOs" Department at the National Forestry Board
- Directorates of State Forestry Units in the country
- Regional Inspectorates of Environment and Water
- Conservation organizations

If any such areas are identified in your forest management unit, follow the guidance below.

RECCOMENDATIONS AND INSTRUCTIONS FOR MANAGEMENT OF HCV 1.1

1. Carry out forest management activities only according to the management plans that apply to protected areas as defined above and their buffer zones.
2. If there is no endorsed management plan for related protected areas or zones then till its development management follows the requirements in PAA and in proclamation order, and following regulations: No clear cuttings, with exception for intensive plantations; Do not substitute the main forest species. Find the values that the protected areas are set up to maintain and assess how regimes and forest management activities maintain these values. Forest managers have to be sure that there are no activities in FMU with negative impact over existing or proposed protected areas or zones.
3. Make periodic checks for the establishment of new protected areas or new proposed protected areas that could potentially be affected by forest management activities.

RECCOMENDATIONS AND INSTRUCTIONS FOR MONITORING OF HCV 1.1

1. Monitoring system is developed for each management plan in protected areas and has to be implemented. Forest managers have to identify indexes referred to observation of forest management activities and to carry out this monitoring according specified schemes, terms, criterions and methods of assessment.
2. If there is no endorsed management plans for related protected areas or zones than managers have to contact the protected area or zone managers and all together have to follow for any negative impacts over HCV in protected areas. Together with protected area managers, define monitoring standard operating procedures and indicators to prevent negative impacts on protected areas' high conservation values by FMU operations. Examples can be affecting water quantity or quality, disturbing wildlife migration routes, increasing fire risks.

HCV 1.2 THREATENED, ENDANGERED AND ENDEMIC SPECIES

RATIONALE

Forests can be defined as habitats of importance for a number of rare and threatened vertebrate and invertebrate animal and plant species. It is difficult for forest managers to identify the numerous threatened species and to assess their presence within a protected area. The information currently available makes it difficult to assess the threshold numbers of populations or threshold biodiversity values, which identify the presence of HCV 1.2. Similar quantitative analyses could be made only for a small number of groups (for example birds). Under this HCV 1.2 come as forests - deposits of threatened and endangered species, as well as forests with natural characteristics making them a potential habitat of such species. This is due to the species rarity and necessity of protection habitats with critical importance for these and other species. That is why The Toolkit recommends habitats of indicator species to be used for the identification of this HCV. The

indicator species are listed in *Annex 1*. This list is based on the "critically endangered" and "vulnerable" categories of the IUCN Red List, Red Book of the Republic of Bulgaria, volume I and II, and the Atlas of Endemic Species in Bulgaria. In the list are also included species that are important for the overall functioning of the ecosystems on a local scale. The list should be periodically revised with the alteration in species status.

DEFINITION, CRITERIA AND THRESHOLD

HCV are areas from FMU where each species listed in Annex 1 from the toolkit occurred. These are species with such a high conservation value, that the permanent presence of only one of them in a FMU is sufficient to be this area a HCVF**.** LFFF including habitats of species listed in Annex 1 are HCVF.

IDENTIFICATION OF HCV 1.2

As part of the forest management the manager should already have conducted a biodiversity assessment resulting in species inventory within the area of the forest management unit. This information should now be analysed to determine whether the FMU contains any species from *Annex 1* that are threatened, endangered or endemic. The presence of only one species from the list in the FMU is an indicator for HCV.

Where the habitat is part of a private property land, which is smaller than a subdivision, the property is defined as a HCVF. Where the property is bigger than a subdivision, the subdivision is defined as a HCVF .

For animal species HCVF can be bigger than the property, as the criterions for its definition are listed in *Annex 1*.

As regards the invertebrate species, considering their specifics the assessment is split into two stages – initial and final assessment (see Invertebrates in Annex 1). The initial assessment provides preliminary idea of the forest value and includes more common, more adaptable to the environment and easy to identify species. This assessment can be undertaken even by a nonspecialist or a forest manager.
The final assessment is undertaken based on major indicator species closely associated to deadwood. Considering that these species are difficult to identify and require a specific method for monitoring and research, their assessment is undertaken by experts in entomology.

RECCOMENDATIONS AND INSTRUCTIONS FOR MANAGEMENT OF HCV 1.2

1. Periodic consultations with experts to assess potential presence of little known, but threatened, endangered or endemic species occurring in FMU.
2. For every species with high conservation value, key information has to be identified. This should include: current status (population and distribution) in the whole country and on local level (in some cases species with lower conservation significance can be more significant in a local context); main trends and threats; Management impacts. The information must be considered to the particular HCVF, but also be in accordance with the other species habitats in the area.
3. In areas defined according to the thresholds in *Annex 1* are implemented only activities, under National Plans for Management of the Species (NPMS) where such plans are available.
4. If there is no NPM of the species, on account of which is defined particular HCV, till its endorsement, management plan for HCVF is developed, which has to follow the specific requirements of identified HCV. An expert for the specific HCV species participates in development of the Management plan.
5. Specific recommendations have to be developed for management of each area with HCV (occurrence of some of the indicator species). Long term management plan for each HCVF have to be developed, considering requirements of identified species indicating presence of HCV, based on habitat-based approach. Management options include, but not restricted to: restoration measures; active management; strict protection. For example, it may be appropriate to mark and take into account during planning process and management: Some key reserve areas; Areas that maintain landscape-level connectivity; Areas that ensure

maintenance of certain habitat features, such as provision of standing deadwood or riparian zone protection.

6. In the context of the managed HCVF may arise other options. Expert guidance may be needed during process of inventory and planning of HCVF management.
   Integrate management proposals into the broader planning process. Forest managers have to be sure that measures are actually implemented, for example through changing operational procedures and training programme to ensure that those changes are implemented. Training has to be provided for the employees that participate in forest management activities. Training has to introduce restrictions caused by presence of HCV and measures for protection and conservation of these values.

RECOMMENDATIONS AND INSTRUCTIONS OF HCV 1.2

1. Have to develop indicators and plan for monitoring implementation and put them in practice. Examples of key monitoring indicators: Specific wildlife populations and trends for their occurrence in FMU; Protection of environment, quality and consistency of the habitat; Pre-operational planning checks; other quantitative data from forest guards such as hunting records.
2. Forest manager have to be aware of any changes connected with protection of HCV on landscape and national level.
3. If the HCVs include samples of natural ecosystems within a substantially altered landscape, features that help to maintain those HCVs within the landscape (e.g. corridors and buffers) should be monitored.

HCV 1.3 CRITICAL CONSERTRATIONS OF SPECIES

RATIONALE

The purpose of this part is to provide protection of forests with critical species concentration, which use this forest area permanently or only during specific period or particular stages of cycle of life. This includes critical places for reproduction, winter shelters and migrations, migration routes and corridors (regarding latitude and altitude). In this HCV ca be used existing systems for identifying areas with high species concentration, for example Ornithology important places, Botanical important places, Herpetological important places and etc.

Examples for important temporary concentrations:

- Concentrations of migratory birds
- Concentrations of wintering birds (roosting, etc.)
- Nesting sites (bird colonies)
- Capercaillie courting grounds
- Bat colonies
- Fish migrations to spawning sites
- Deer rutting areas
- Congregations of amphibians and/or their offspring in water bodies or wintering sites
- Concentrations of migrating amphibians
- Reptile wintering sites
- Reptile congregations at the boundary of forest edge to open areas.
- Invertebrate congregations in old hollow trees, dead standing and fungi covered trees and decaying wood.

DEFINITION, CRITERIA AND THRESHOLD

Lists with species indicators for this CV with their minimal concentrations in Bulgaria are listed in *Annex 2*. There are specified threshold values for each species. When there is a critical temporary or permanently concentration of species or important refuge areas, according to regulations in *Annex 2*, then the forest is HCVF.

IDENTIFICATION OF HCV 1.3

Identification of this HCV is divided into a preliminary assessment and a full assessment. If the preliminary assessment indicates that a HCV may be present, then the forest manager will be required to conduct further work to establish whether or not the HCV is actually present. This is the 'full assessment'.

PRELIMINARY ASSESSMENT

Verification has to be done whether the FMU contain landscape features, which determine concentrations of wild animals? This information can be provided by the local people, or from habitat surveys. Probably the forest manager collected most of this information as part of the forest management requirements. Special attention should be paid to the local knowledge – the forest manager should communicate with local people and record the information received from them. If the FMU contains forest areas with presence of any of the examples with important temporary concentrations listed in HCV 1.3 rationale, full assessment have to proceed.

FULL ASSESSMENT

1. Biodiversity assessment should include survey for concentrations of migratory birds. Have to make verification for existence of threshold values listed in *Annex 2*. The verification should include one or more specific activities aimed at establishing whether there is a concentration of migratory bird species within the indicated forest types. The survey should consist of the following steps:

- Establish *when* the forest type(s) are likely to be used by migratory birds (with help of both local and expert knowledge)
- Conduct one or more *field surveys* to identify the present species of migratory birds
- The field survey should use the best scientific *methods* (expert assistance might be needed)
- Both the *number* of species and the *population densities* should be estimated
- The survey report should include a full description of methods (with justifications) as well as the results.

If a concentration of migratory birds is found, the forest manager should contact relevant experts or organizations to determine whether this constitutes a globally significant concentration.

2. If in the FMU are areas recognised as important temporal feeding or refuge areas, or separate groups of trees from the LFFF, which are used as sleeping areas from significant number of animals, or areas of reproduction importance, then the forest manager should conduct surveys looking for concentrations of species. Have to check for existing threshold values according to *Annex 2*. The survey should include recommendations as to whether any concentration is significant (local knowledge will be important to inform this decision).

RECCOMENDATIONS AND INSTRUCTIONS FOR MANAGEMENT OF HCV 1.3

1. The forest manager is responsible for clearly describing the specific HCV. For example, 'section X has two bear's dens inhabited by x bears" or "the rocks of subsection x inhabit bats colonies from species A and B with average number of C or D", or there is a pond in section X with approximate size of A x B meters and approximate depth of C meters" or "among the rock heaps within Subsection X, observations of Y snakes were recorded" or "X terrestrial tortoises have been observed within a small area of Section / Subsection X". Maps with spatial location of the HCV have to be created.
2. Identify key information for each HCV. This should include: importance (global, provincial, local, etc.) of the temporal concentration (expert opinion); Current status of important species that comprise the concentration; Main trends and threats to the maintenance of the

forest type or habitat feature that contains the HCV; Potential management impacts over the forest or habitat feature as HCV.

3. Have to provide leisure conditions in areas defined by *Annex 2*, through stopping any forest activities when areas are used by species listed in *Annex 2*. During the rest of the year activities for protection of defined areas in compliance with species recommendations are implemented, the specific HCV is developed for their use according to National Plans for Management of the Species (NPMS).
   If there is no NPMS for the species, for which is defined specific HCV, a management plan for HCVF is developed until its endorsement, complying with specific requirements of identified HCV.
4. An expert for the specific HCV species participates in development of the Management plan.

- ✓ Develop concrete recommendations for management of each HCV. They may include active management, measures for recovery or strict protection, **according to particular conditions.** It may be appropriate to define some key reserve areas, maintain landscape-level connectivity, and/or ensure maintenance of certain stand-level habitat features, such as canopy cover. ***For instance*** – Important Bird Areas. Regions and seasons of non-disturbance should be defined: 150 m, August-March. For amphibians – buffer areas are defined around water bodies (50 m in diameter around the water body) for seasons of non-disturbance: February – July (the period cound be extended to August depending on the geographical location). For aquatic turtles buffer areas of 100 m in diameter are defined around the water body for the period May-July. For reptiles seasons of non-disturbance are defined in the strip between the wood and open areas with a buffer of 40 m in diameter in the period April – June.
- ✓ Integrate management proposals into the broader planning process. HCVF management plan has to provide protection of defined HCV. Forest manager have to be sure that measures are actually implemented, for example through changing operational procedures and ensuring that a training programme has been completed. Training has to introduce restrictions caused by presence of HCV and measures for its protection.

Indicative recommendations for management of forests providing habitats for invertebrate species listed in Annex 1 to the Toolkit

Unlike most other animal species, saproxylic invertebrates are strongly attached to the habitat that is suitable for them, which in many cases may even be a single tree. They are highly specialized and a population of a species can survive many generations feeding and living in just one dead branch or one hollow, which makes them highly sensitive to negative changes and human impacts on forests.

- Maintenance of natural and semi-natural forests: with a diverse age structure, native tree species and a sufficient number of mature and decaying old trees in different stages of aging. Measures should be taken in the managed forests to ensure there is sufficient amount of trees of different ages, while leaving unaffected trees typical of the habitat. Species that are not typical for the place (alien species) should be thinned out or entirely removed. Certain places should be left unexploited where trees can grow old and die naturally. To maintain a sustainable use and preserve biodiversity, it is recommended to limit the amount of dead wood to 35 m3/ha (or 3-8% of the total volume of available wood) while leaving all the dead trees that have a diameter exceeding 22 cm.
- Presence of trees from all levels of thickness for the main tree species.
- Enhancement of fire prevention measures and control in forests.
- Study of the populations of beetles and butterflies and incorporation of data into forest management plans and activities.
- Identification and marking of biotope trees – both present and future.
- Preventive measures: trhough appropriate forest management ensuring a balance of trees in various age and structure and avoiding unnecessary sanitary logging. It is important to dispel the misconception that saproxylic invertebrates are "vermins" in the woods.
- Preservation of undergrowth and of ecotones – the border stretches between wood and open areas.

RECCOMENDATIONS AND INSTRUCTIONS FOR MONITORING OF HCV 1.3

1. This part of the HCVF management includes accomplishment of periodical monitoring and analysis of forest condition, through field observations and development and application of specific programme for each HCVF. For development and application of this programme consultations with experts are needed – environmental conservation experts, consultations and information can be received by relevant institutions (departments of Ministry of Environment and Water and National Forestry Board).
2. Monitoring program has to be developed due to standard operational procedures, which include clear indicators, appropriate for the management purposes. It can be conducted once or many times per year, if seasonal report is needed, for example if important events occurred in FMU only during specified months.
3. 3.Examples of key monitoring activities: Specific wildlife population trends; Habitat quality survey results; Local people's perceptions of the changes in the species status; Pre-operational planning checks; Other quantitative data provided by forest guards such as hunting records
4. When the HCVs include samples of natural ecosystems within a substantially altered landscape, features that help to maintain those HCVs within the landscape (e.g. corridors and buffers) should be monitored.
5. It is possible to found out during the monitoring process that management plans do not reflect real forest conditions, treats and trends. In this case have to make consultation with an expert, to define if there are gaps in plans and if current management model is critical for conservation of species representing HCV. If necessity for more strict management regime is determined, areas with HCV 1.3 can be included in Action plan for biodiversity conservation within a bigger landscape site or can be included in protected areas.

HCV2. Landscape-level ecosystems and mosaics. Intact Forest Landscapes, large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.

INTRODUCTION

Currently there is no legislation in Bulgaria regulating the definition of such criteria. Moreover – on a national level there are no credible scientific studies defining the minimum size of forest areas supporting viable populations of occurring species.

RATIONALE

Forests that contain viable populations of most or all native species should be large in size, and relatively unaffected by recent human disturbance and fragmentation (% of unfrosted areas). The identification of this conservation value aims at including typical landscapes from the forest-vegetation area and their biological diversity.

DEFINITION

HCV 2 are important forest areas, forming landscapes of regional or national significance, where all naturally occurring species exist in natural patterns of distribution and abundance.
With regional significance are those forest areas, which within the framework of the region are unique according to naturalness, fragmentation and minimum size of the area hosting vital populations of naturally occurring species.

With national importance are those forest areas, which within the framework of the country are unique according to naturalness, fragmentation and minimum size of the area hosting vital populations of naturally occurring species.

CRITERIA AND TRESHOLD

During development of the criteria for forests distribution, according HCV 2 principle of forest-vegetation district is used. Forests, which meet this conservation value, are separated by criteria - naturalness, fragmentation and minimum size of the area hosting vital populations of naturally occurring species.

1. Naturalness – the forest consists of vegetation species with natural occurrence in the country, regardless of their origin.
2. Fragmentation – identification of the anthropogenic landscapes percentage within the described area and their spatial distribution.
3. Size of the area – based on the type of plantations, their geographical distribution and the area necessary for the normal vital activities of the populations of all naturally occurring species.

IDENTIFICATION OF HCV 2

PRELIMINARY ASSESSMENT

Potential forests complying with the requirements of HCV 2 have a clear geographical differentiation. Therefore as a first step the geographical region should be identified. **Potential regions are: the Pirin, Rila, Rhodope, Vitosha and Strandja Mountains, the Danube Hilly Plain, the Balkan and Fore-Balkan Mountains, Western bordering mountains and Belasitsa.**

The altitude of the described area determines the potential geographical objects, which can be fully assessed . As **a second step** the geographical objects are identified according to the altitude **Strandja Mountains, the Danube Hilly Plain, the East part of the Balkan and Fore-Balkan Mountains at the altitude to 1000 m. The Pirin, Rila, the Balkan (without East part) and Rhodope (without East part) at above 1000 m.**

The forest type is determined according to the tree species that form the forest. Tree species form pure or mixed plantations, and either of them might dominate.. As **a third step** tree species are identified: **they have to be naturally widespread in Bulgaria.**

FULL ASSESSMENT

Table.2.1: Identification according to the table with criteria parameters.

Forest	% Naturalness	% Fragmentation	Min. Size, ha
Strandja Mountains, the Danube Hilly Plain, the East part of the Balkan and Fore-Balkan Mountains	70	7	40 000
The Pirin, Rila, the Balkan and Rhodope	80	5	50 000

According to the above criteria the full assessment of the forests in Bulgaria is developed and the all FMU come under this HCV are identified. The data is presented in a table to the forestry section level in State FMU and are given in *Annex 3*.

The complete information concerning the development of HCV2 and the graphical materials and maps are available on a magnetic wearer and can be provided from the State FMU or WWF DCP Bulgaria office: Sofia 1421, Tzanko Tzerkovski 67, A, 3; tel: + 359 2 964 05 46, fax: + 359 2 964 05 45; e-mail: office@wwfdcp.bg; fcic@wwfdcp.bg or internet address: www.wwfdcp.bg

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RECCOMENDATIONS AND INSTRUCTIONS FOR MANAGEMENT OF HCV 2

1. Planned forestry activities should not decrease the forest cover of the area.
2. Forestry systems should maintain a complex forest structure of different ages and on landscape level. Environmental and various forestry systems have to be used according to specific characteristic of each plant.
3. Not less than 2% from forests from main presented tree species in the FMU territory or part of them belong to HCV2, have to be separated for Old-growth forests. Detail recommendations for Old growth forests management are given in *Annex 4A*, table 15.
4. The ecological principles and practises during planning process and forestry activities have to be observed.
5. Priority is given to natural regeneration. Have to implement forestry systems, which provide natural regeneration.
6. The root tree composition of the plantations is not permitted to be changed even during the reconstruction activities. This is applied also when the reconstructions are made for plantations over poor habitats.
7. Only local species and origins are used for restoration (afforestation) activities. In areas with identified HCV 2 non-local tree species and origins should not be introduced, excluding dendrariums and geographical cultures, as well as animal species outside their natural area of distribution, excluding State Game-Breeding Stations.
8. Artificial forestation on natural open areas in wooded lands is not permitted, with exception of the anti erosion activities.
9. Activities (including forestry activities) that increase the anthropogenic fragmentation of the area are not allowed, even if the current percent is below the defined in the respective criterion. Roads and infrastructure planning have maximum to maintain landscape integrity. Appropriate elements have to be provided, decreasing fragmentation influence of the area, which will provide animals movement –for example planning of corridors for movement, connections and leisure zones for animals and etc.

RECCOMENDATIONS AND INSTRUCTIONS FOR MONITORING OF HCV 2

1. The quantitative indices of all three criteria – naturalness, fragmentation and size of the area - should be followed during the monitoring. Quantitative indices should correspond to the values in the full assessment table, for all of the identified forest-vegetation areas.
2. Monitoring of documents should be carried out annually. Current forestry plans, management plans, spatial management plans have to be used and also procedures related to alteration in the purpose of lands and forests from the forest fund, etc.
3. Control over implementation of timber activities have to be done.
4. Once in every 5 years a field sites revision should be carried out, in which activities related to any of the criteria are implemented. Consultations with communities and relevant authorities to ensure that they are aware of each other activities, and work to mitigate potential future threats such as illegal logging, wildcat mining, and unsustainable agriculture.
5. Have to make monitoring over influence of anthropological external threats, for example fires, as a monitoring of conditions for occurring of extreme events, for example pest attacks or others and for implementing of preventive measures when it's possible.

HCV 3. Ecosystems and habitats. Rare, threatened, or endangered ecosystems, habitats or refugia.

INTRODUCTION

Up to now no full assessment of ecosystem types has been conducted in Bulgaria. There is also no assessment of threatened or endangered ecosystems. In the past (in the 60-ies and 70-ies of XX century) the

method of forest typology was developed, but later on it was abandoned in favour of habitat features (soil richness and humidity) typologization. A significant part of the unique Bulgarian forest ecosystems are included within protected areas. Protected forests, however, cover a much smaller area than the actual area of high conservation value forests. Unfortunately the protected areas statute not always means implementation of adequate measures for the protection of rare forest ecosystems.

RATIONALE

HCV3 focuses on ecosystems, which are representative for particular forest types Some forest types are naturally rare in the country and the aim of this HCV is to provide protection for threatened or endangered ecosystems, which they present. This includes mainly forest types which were previously widespread or typical for wider region.

If most of these habitats **outside** the FMU are cleared, the importance of these ecosystems **inside** the FMU increases, which means that they will need tighter management, or perhaps protection. It is therefore in the interest of FMU managers to both monitor what is happening to the ecosystems they manage in the wider landscape, and to help mitigate the threats they are under. Rare, threatened and endangered ecosystems in Bulgaria, which include forest areas, are listed in *Annex 4* to the toolkit. The list of ecosystems in *Annex 4* is done according to the European classification EUNIS.

DEFINITION

All LFFF in Bulgaria including representatives of habitats listed in *Annex 4* should be considered as HCVs. HCV forests are also those with characteristics, distinguish them as Old growth forests, with their age structure and natural level, which are habitats for complex species from specific ecological and taxonomic groups.

CRITERION AND TRESHOLD

All forests complying with the characteristics in Annex 4 have HCV 3. Nevertheless Old growth forests (OGF) don't fall into Annex 4 list, all forests which have characteristics, distinguishing them as being in a stage of Old growth forests must also be identified as HCV 3.

According to the definition for **Old Growth Forests (OGF)** in the National FSC Standard, **OGF are forests in the final stage of their development where the stand has reached a considerable age, not significally affected by large-scale natural disturbances and human impacts, and features uneven spatial and age structure; presence of old live trees with diameters close to the maximum for the relevant tree species and habitat; standing and fallen large dead trees in various stages of decay.**

PRELIMINARY ASSESMENT

As part of the forest management process, the forest manager should already know which forest types are present within the FMU. This information is now analysed to identify potential forest regions in the FMU that are in, or contain threatened or endangered ecosystems according to *Annex 4*.

During the survey of existing HCV 3 very useful for the forest managers will be consultation with all existing maps of forest types within the FMU. Environmental experts can provide consultations to guarantee that habitats comply or not with described in HCV 3 definition and for those in *Annex 4*, consultations and information can be received from related institutions (Departments of National Forestry Board, Ministry of Environment and Water)

FULL ASSESMNET

If the existence of HCV areas in FMU is identified or potential, field observation have to be carried out for identification of accurate borders of HCVF. After defining the borders, they are mapped on the FMU map, the data have to be put in the planning activity documentation, as well in a following forest management on the area of FMU.

With a view to the above the following examples can be indicated for identifying HCVF by HCV 3: Existence of Black Alder forests or natural Austrian Pine forests, or natural forests of Pinus peuce and Pinus heldreichii or others according *Annex 4*, all of them are HCVF. Their accurate borders have to be defined on the field and should be mapped on the FMU map and take them into account during forest management and planning activities in the area, in order to provide protection and extend (of possible) of HCV.

Recommendations for management of HCV3 forests are given in *Annex 4A*.

RECCOMENDATIONS AND INSTRUCTIONS FOR MANAGEMENT OF HCV 3

This part of the HCVF management includes accomplishment of periodical monitoring and analysis of forest condition, through field observations and development and application of specific programme for each HCVF. For development and application of this programme consultations with experts are needed – environmental conservation experts, consultations and information can be received by relevant institutions (departments of Ministry of Environment and Water and National Forestry Board).

1. Monitoring program has to be developed due to standard operational procedures, which include clear indicators, appropriate for the management purposes. It can be conducted once or many times per year, if seasonal report is needed, for example if important events occurred in FMU only during specified months.
2. During fieldwork the following indexes are observed, vitality of each tree, plantation structure, state of health, existence of degeneration processes, frequency, size and location of empty spaces, fragmentation levels, basal area, succession presence and its direction and etc. and/or remote sensing interpretation of received data.
3. The threats for these HCV 3 forest types have to be specified and how severe they are, and management measures required to decrease them have to be identified.
4. Successful implementation of monitoring measures require training of the employees, involved in forest management activities, all have to be aware of the restrictions concerning the HCV presence and measures taken for its protection.
5. During the monitoring process is possible to found out that management plans do not reflect real forest conditions, treats and trends. In this case consultation with an expert have to be made, to determine if there are gaps in the plans and if current management model is critical for this ecosystem type conservation. If necessity of change to more strict management regime is determined, areas with HCV 3 can be included in Action plan for biodiversity conservation within the framework of bigger landscape site or can be included in protected areas.

HCV 4. Critical ecosystem services. Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.

RATIONALE

This HCV pertains to the important functions of the managed forest. Examples of identified HCV components include:

- Forests unique sources of drinking water
- Forests critical for water catchments
- Forests critical for erosion control
- Forests providing a barrier for fire
- Forests with critical impact on agriculture and aquaculture

HCV 4.1 UNIQUE SOURCES OF DRINKING WATER

RATIONALE

Many sources of drinking water for entire communities or settlements depend mostly on forests. These are surface or underground sources, like streams, rivers, lakes, springs or wells. If the forest protects and maintains water supplies for people or communities who have no alternative sources of drinking water, then this will always be critical.

DEFINITION

In Bulgaria HCVs are all LFFF falling within sanitary guarded areas 1 and 2, which supply water for drinking and other daily needs and are regulated under Regulation 3, 2002. HCVs are also LFFF adjacent to sources of water for drinking and other daily needs, but without officially identified sanitary guarded areas.

IDENTIFICATION OF HCV 4.1

1. The local water economy companies supplying drinking water have to be contacted, or the competent Basin Directorate to MoEW, in order to identify the existing sanitary guarded areas for drinking water sources in the specific forest management unit.
2. In case there is no centralized water supply for a settlement or for a separate property, the local stakeholders within and around the forest management unit have to be identified. Detailed consultations with local communities have to be carried out to identify critical locations of water sources (critical springs, headwaters, and other sources of drinking/daily water.)

Identify whether the communities have access to alternative sources of water that is not dependent on the FMU (for example piped network bringing water from a source outside the FMU). Check whether this access is available all year long.

Identify and map the location of important community sources of water for drinking and other daily needs, as well as the level of protection that is provided. Typical examples are:

- ✓ Rivers and streams flowing from or through the forest area and supplying water for the community;
- ✓ Springs located in the forest or affected by the forest area, used directly or through a piped network;
- ✓ Wells located in the forest, or deriving water from a water table affected by the forest.

The manager/forest user has to conduct a needs analysis (possibly in conjunction with HCV 6) of important water sources.

The water catchments area, the water source, has to be identified, and whether it is partially or entirely located within the forest management unit.

Identify whether the forest cover affects the quality or quantity of these water sources.

RECOMMENDATIONS AND MANAGEMENT GUIDANCE FOR HCV 4.1

1. The forest manager has to comply with the management and conservation regimes, regulated under Regulation 3, 2002, concerning sanitary guarded areas surrounding sources of drinking and other daily needs water.
2. When there are no established sanitary guarded areas of drinking water sources, the requirements of HCV 4.1 have to be used. Specific management and protection measures have to be developed, complying with the requirements in Regulation 3, 2002. These are some general recommendations for forestry activities:

- ✓ Support the establishment and maintenance of mixed plantations with uneven spatial structure;
- ✓ Forestry systems have to be used, which provide permanent forest cover in forested water catchments;
- ✓ The density/fullness of plantations in the water catchments have to be up to 0.5, and not above 0.8, because in this case the percentage of evapo-transpiration grows;
- ✓ Prohibition of bare loggings;
- ✓ Areas close to the water sources have to be managed more carefully, the land surface has not to be damaged during timber transporting, timber logging have to be least intensive or not carried out at all.

3. The staff involved in forestry activities has to be trained according to the limitations caused by the identified HCVs and measures for their protection.
4. The forest managers have to search compensations for missed benefits or extra costs of the forest management during the process of sanitary guarded areas development.

RECOMMENDATIONS AND GUIDANCE FOR THE MONITORING OF HCV 4.1

Forest managers shall make use of the water monitoring carried out by expert bodies – RIEW, or water economy companies.

HCV 4.2 FORESTS CRITICAL FOR THE REGULATION OF WATER FLOW IN CATCHMENTS

RATIONALE

Forests are substantial factor for maintaining terrain stability and controlling erosion. They have an important role in preventing flooding, controlling stream flow regulation and water quality.

Where the forest covers large area from the water catchments, it has a critical role in maintaining the water quantity and quality. The greater the importance of the water catchments in terms of flooding or drought risk or water usage, the more likely the forest is crucial for maintaining these functions and more likely that the forest is a HCVF. Sometimes forests protect against erosion and landslides areas where the consequences, in terms of loss of productive land, damage to ecosystems, property or loss of human life, could be severe. In these cases the ecosystem service provided by the forest is critical and it should be considered as HCV.

DEFINITION, CRITERIA AND THRESHOLDS

In Bulgaria the following LFFF are HCVs:
1. LFFF included in the water catchments areas of torrential water currants, whose forest cover exceeds 40%;
2. *Pinus mugo* communities;
3. LFFF forming the high forest border (HFB) and regulated under the Forests Act, or included in the 200 m belt below the HFB;
4. Natural riparian forests of *Q. pedunculiflora, Q. robur, Fr. oxycarpa, Ulmus minor, U. laevis, Salix alba, Alnus glutinosa, Popolus alba, P. nigra, Platanus orientalis,* included in the flooded terrace of river currants;
5. Forests between the dyke and the right bank of the Danube, island forests and the 200 m belt from the high riverbank;
6. Forests in the 100 m belt of Maritza, Toundja, Mesta, Strouma, Arda, Lom, Tzibritza, Ogosta, Skut, Iskar, Yantra, Vit, Sazlijka, Stryama, Ossam, Roussenski Lom, Kamchiya, Veleka and Rezovska (the Bulgarian part of it) Rivers;
7. LFFF included in sanitary guarded area 3 of drinking water dams, regulated under Regulation 3, 2002.

IDENTIFICATION OF HCV 4.2

1. Identify whether the forests fall within any of the HCV 4.2 definitions.
2. Identify forests in the FMU, included in catchments areas of torrential water currants (with irregular alterations in the water flow, depending on the intensity and quantity of rains).
   Sources of information could be the Hydro-meteorological Stations – for the water flow,
   Civil Protection departments and municipalities - for torrential activities. Examples for potential HCVFs are forests in the hydrographical system of all internal rivers, forests at the high forest border and forests in dam catchments areas.
3. In case such forests are identified, check past torrential activities (flooding) and their character.

RECOMMENDATIONS AND MANAGEMENT GUIDANCE FOR HCV 4.2

1. The locations of all potential HCV areas in the FMU have to be mapped. It is recommended to use forest management materials and consult the experts. Field check has to be done in order to ensure accuracy of the mapped information.

2. The identified forests with water protection and water regulation functions are mapped.
3. Management activities have to be carried out in compliance with the Rules for Identification, Organization and Management of Forests and Areas with Special Designation. The planning and forestry activities in HCVF have to maintain and improve HCV 4.2. These are some general recommendations for forestry activities:

- ✓ Forestry systems providing permanent forest cover in forested water catchments have to be used in order to decrease the surface water flow;
- ✓ If appropriate afforestation activities increasing the forest cover of the water catchments have to be carried out;
- ✓ Support for the establishment and maintenance of mixed plantations with uneven spatial structure;
- ✓ The density/fullness of plantations in the water catchments have to be above 0.5;
- ✓ Prohibition of bare loggings;
- ✓ Technological schemes and equipment have to be used to provide minimum damage of land surface during timber transportation;
- ✓ When forestry activities are finalized, rehabilitation of damaged areas (i.e. forest skid trails) have to be carried out;
- ✓ No forestry activities have to be carried out at *Pinus mugo* communities.

4. The staff involved in forestry activities has to be trained according to the limitations caused by the identified HCVs and measures for their protection.

RECOMMENDATIONS AND GUIDANCE FOR THE MONITORING OF HCV 4.2

An adequate monitoring system has to be organized and implemented for forests containing HCV 4.2. The water monitoring carried out by expert bodies can be used – RIEW, or water economy companies.

HCV 4.3 FORESTS CRITICAL FOR EROSION CONTROL.

RATIONALE

The LFFF of the following regions and soil types are potentially endangered by the development of erosion processes:

Regions:

- Erosion process: The ridges and Southern slopes of the Balkan, Rhodope, Rila, Pirin, Vitosha, Belassitza, Ograzhden, Malashevska, Ossogovska and Konyavska Mountains.
- Avalanche processes: The Central Balkan, Rila, Pirin, Vitosha, Ossogovska Mountain and West Rhodope slopes.

Soil types (The forest management classification is used):
Maroon forest soils, brown forest soils, mountain-forest dark-coloured soils, mountain-meadow soils, humus-carbonate soils, alluvial and delluvial soils, anthropogenic soils, under-developed and degraded soils (Primitive Soils category of FAO)

DEFINION, CRITERIA AND THRESHOLDS

In Bulgaria the following LFFF are HCVs:

1. LFFF with slope above 30^{o} (or less, in case they are under the water-fusion area with slope above 10^{o} and length above 200 m) with a total area above 1 ha and tree density/fullness over 0,6;
2. Forests grown under technical projects for erosion control, regulation, bank-protection and wind-protection forest belts;
3. Forests protecting settlements or communication structures, lie on the path of already fall avalanches (data from the Mountain Rescue Service), forests into the snow catchments areas with slope above 20^{o}, forests situated under a deforested snow catchments area with length over 200 m and slope above 20^{o};

IDENTIFICATION OF HCV 4.3

1. Identify whether the forest covers some of the HCV 4.3 definitions.
2. Identify sites with slope above 30^{o} in the territory of the forest management unit. Information about this can be collected from forest management materials and field checks. Relevant bodies or experts could also be contacted.
3. Snow catchments area covers territory with slope above **20^{o} - 60°** providing formation of snow cover with above 0,5 m depth. Information concerning potential avalanche dangerous areas can be received from the Mountain Rescue Service. Monitoring of the opposite slopes is recommended.
4. Typical examples of forests containing HCV 4.3 are:

✓ Forests above 1500 m altitude.
✓ Forests located on:

- heavily cracked rocks;
- areas with weak connections between the elements in the main rock;
- areas with intensive weathering processes of the main rock;
- peripheries of plateaus;
- banks of water currants, which prevent the digging under the slope bottom;
- LFFF in the list with avalanche dangerous areas according the Mountain Rescue Service data.
- Areas with already felled avalanches can be recognized by: deciduous forest or young coniferous forest strips lay on the slope direction, and on steep slopes in older coniferous forests.

RECOMMENDATIONS AND MANAGEMENT GUIDANCE FOR HCV 4.3

1. The management of forests with HCV 4.3 have to comply with the requirements of FA about forests with special designation and aim the prevention of erosion processes.
2. The planning and management activities in HCVFs have to comply with HCV 4.3. General recommendations for forestry activities are:

In forests with crucial anti-erosion importance:

✓ When the plantation from the HCVF 4.3 list has one or more additional purposes (for example forest resort), the forestry activities have to achieve balance between them but the anti - erosion function is a priority;
✓ Have to be used forestry activities which provide permanent cover with forest of the wooded lands, as the density/fullness of plantations have to be above 0.5
✓ Mainly forest thinning and sanitary loggings have to be carried out;
✓ Rejuvenation loggings are allowed in forests with fast regeneration of sprout tree species;
✓ Bare loggings and short-term gradual loggings shall not be carried out in very steep areas (31-45^{o});
✓ In stony and ravine areas (above 45^{o}) all forestry activities are forbidden;
✓ Equipment and technologies for bare loggings shall cause minimum damage to the vegetation and soil cover.
✓ If appropriate forested activities are provided as the native tree species have the priority;

In forests with crucial importance for prevention of landslides and screes formation:

✓ Loggings are not allowed;
✓ Activities providing additional vegetation have to be carried out;
✓ Activities strengthening the stability of the slope bottom during water currants are envisaged (including the construction of technical equipment forming a balance profile).

In forests preventing the avalanches:

✓ The assessment of plantation stability is important and measures for its strengthening if needed;
✓ If forestry activities are needed than cautious intervention with low intensity are recommended;
✓ Bare loggings are forbidden;
✓ Wide-open areas should not be created during the regeneration cutting as well as open areas on the slope direction;
✓ Set up and maintain plantations with different ages with group structure and maximum density;
✓ Activities providing appearance of additional vegetation;
✓ Activities in mountain pine formations are not allowed;

3. Skid trails, log yards and clearings needing rehabilitation have to be identified and mapped. When timber production is finalized, relevant restoration activities have to be carried out, according to the terrain damage.
4. Developing of management plans or rules for rehabilitation of damaged or other areas, threatened by erosion and/or areas where the monitoring indicates high levels of erosion.
5. The staff involved in forestry activities has to be trained according to the limitations caused by the identified HCVs and measures for their protection.

RECOMMENDATIONS AND GUIDANCE FOR THE MONITORING OF HCV 4.3

1. An adequate monitoring system should be developed and implemented for forests with HCV 4.3. It is recommended that RIEW experts are contacted and consulted.
2. In forests with crucial anti-erosion importance short-term and long-term monitoring have to be carried out:

✓ Short-term – current erosion activities (damaged areas). Annual monitoring;
✓ Long-term – the depth of soil profile and dead forest cover (DFC) are measured. Monitoring– each 10 years.
✓

3. In forests preventing landslides and screes the dynamics of the following parameters is monitored:

✓ For existing screes – volume of accumulated materials is measured;
✓ Area dynamic of the landslide;
✓ Volumetric dynamic of the destroyed area.

Annual monitoring is carried out.

4. In forests preventing the formation of avalanches existing avalanche activities are monitored. Annual monitoring is carried out.

HCV 4.4. FORESTS PROVIDING A BARRIER FOR FIRE

RATIONALE

Fires are part of the natural dynamics of forest ecosystems. Forest fires, whether originate from natural or anthropogenic causes, can transform into destructive and uncontrolled fires that can be a serious threat to human life and property, economic activity, or endanger ecosystems or species.
Fires have serious and continuing impact on Bulgarian forests during the last 10 years. The importance of protection of all Bulgarian forests from further fire damage is recognized. A single plantation in a key position can prevent fire spreading to other areas. Well growth and dense deciduous forest is more fireproof than sparse deciduous or coniferous forests because of the fall of leafs and decaying. During the big fires the deciduous forests have the biggest leaf density and in the same time the leafs felled during the last fall are in first stage of decay, therefore there is no enough inflammable material compared for example to coniferous forests. Other point of view is that the forest has to be very well growth, with dense crowns cover thereby will restrict the grass and bushes growth as storeys. This supposed restriction of activities, which decrease the crown cover; leave easy flammable wastes and cause appearance and growth of vegetation in down storeys until the full forest coverage is completed.
DEFINITION

All deciduous forests among coniferous plantations, between coniferous plantations and settlements, and between coniferous plantations and lands with different agricultural uses, that are minimum 100m and maximum 250 m wide and include deciduous species except Birch, Robinia and poplar hybrids/cultivars), are HCVF.

IDENTIFICATION OF HCV 4.4

1. Identify fire expertise relevant to the region of the forest management unit and obtain information on fire history, causes and forecasts. For more information contact relevant authorities or experts,

review maps relevant to the wider landscape, review forest management materials, collect information from field visits.
2. Determine whether there is a trend of development of large-scale fires near or bordering the FMU.

RECOMMENDATIONS AND MANAGEMENT GUIDANCE FOR HCV 4.4

1. Ensure the integrity of forests against fire threats. Forests that are fragmented, with open canopies, or have experienced high harvesting intensities, are more prone to fire damage.
2. The deciduous composition in the existing deciduous forests strips has to be preserved and maintained. The tree density/fullness in them have to be above 0.7.
3. In case no such strips exists, relevant afforestation schemes have to be used for establishment of buffer zones with fire resistant tree species.
4. Development of fire fighting plans, including standard operating procedures for fire fighting and training of the staff, complying with the forest legislation in the country.

RECOMMENDATIONS AND GUIDANCE FOR THE MONITORING OF HCV 4.4

The monitoring of HCV 4.4 shall include frequency and area spreading of burnings and fires in the forest management unit.

HCV 4.5. FORESTS WITH CRITICAL IMPORTANCE FOR THE PROTECTION OF AGRICULTURAL ACTIVITIES (AGRICULTURE, AQUACULTURE) AND INFRASTRUCTURE SITES

RATIONALE

Where forest areas are close to agricultural lands, fishing or tourist regions, or include main habitats of fishes, their impact can sometimes be crucial to maintain the resources or economic production. The forests impact will vary according to the climate and topography, spatial configuration of the agricultural land and the forest, as well as the crops types. Forests influence also the fish resources in water bodies located in them or passing by. The consequences from agricultural, aqua and fish production loss as well as tourist income will also vary depending on the social and economic circumstances. Communities whose agriculture or fishery is the main livelihood are particularly vulnerable from production loss. Forests established particularly for the protection of engineering equipment have critical importance for maintenance of economic activities and existing infrastructure sites. Their crucial importance and meliorative influence includes stabilization of environment, surrounding engineering equipment, development of optimum regime for isolation of vehicles, accumulation of toxic substances, noise insulation and decrease of evaporation from inter- canal areas.

This element of HCV4 aims to identify forests that have crucial importance in maintaining the services on which depend the agricultural production and fish supply and engineering equipment**.** Potential for critical impacts over agriculture and fish resources could have forests located within arable lands in the regions of the Danube Plain, Dobroudja and Eastern Trakiya (Thrace), as well as floodplain forests along the banks of all rivers and the upper reaches of rivers, which are fish reproduction sites. Forests protecting engineering equipment include: 100 m wide forest strip on both sides of railways, motorways and gas-pipes, 50 m wide strip along first-class roads, 10 m wide strip on both banks of irrigation channels, etc.

DEFINITION

All forests with crucial influence over forest functions, on which depends agriculture, fish resources and protection of engineering equipment, are HCVFs when they are:

1. **Forest strips, adjacent to arable lands, that have been created as, or function as field-protection forest belts, and are up to 100 m wide;**
2. **Riparian forests dominated by different *Salix* species along the Danube bank and on the Danube Islands, flooded at high water, as well as along the banks of Maritza, Tundja, Mesta,**

Strouma, Arda, Lom, Tzibritza, Ogosta, Skut, Iskar, Yantra, Vit, Sazlijka, Stryama, Ossam, Roussenski Lom, Kamchiya, Veleka, Rezovska (the Bulgarian bank of it) Rivers.

3. **Forests planted for the protection of engineering equipment.**

IDENTIFICATION OF HCV 4.5

1. Identifying whether there are forests complying with HCV 4.5 requirements in the FMU. Sources of information can be forest management plan, maps of forest areas, land use maps, social research, consultations with communities and stakeholders in or adjacent to the FMU, data from the field work.

RECOMMENDATIONS AND MANAGEMENT GUIDANCE FOR HCV 4.5

1. Any threats of key forest functions from FMU operations have to be assessed. After the assessment consultation with communities and relevant experts and bodies has to be organized, to determine how external activities affect critical forest areas, and take measures to mitigate potential future threats.
2. Measures for the protection or restoration of damaged areas have to be developed after the assessment of external threats.
3. The most effective in practice for the forests planted or functioning as field-protection forest belts is the openwork (blow through) field-protection belt. Management should be orientated to creation and maintenance of openwork belts through development of tree (upper) and shrub (lower) storey. If the length distribution is regular the openwork along the whole height should be no less than 50%.
4. The state of fish resources is crucial for riparian forests through the fact that riparian forest communities are vulnerable to disturbances, no economic activities have to be planned or implemented in them. Protection and restoration activities for riparian communities have to be planned.
5. The forest thinning in forests protecting engineering equipment have to be carried out with moderate intensity. Restoration activities have to provide gradual transition between the old and the new forest generation, which shall not decrease substantially protection functions of the forest – only loggings with a long restoration period have to be implemented.

RECOMMENDATIONS AND GUIDANCE FOR THE MONITORING OF HCV 4.5

Adequate system for monitoring of critical forest areas has to be organized and implemented for HCV 4.5 forests. Updated maps and information from field wok have to be used. Monitoring of the yields of arable lands and fish resources in critical areas is needed.

HCV 5. Community needs. Sites and resources fundamental for satisfying the basic necessities of local communities or Indigenous Peoples (for example for livelihoods, health, nutrition, water), identified through engagement with these communities or Indigenous Peoples

INTRODUCTION

Many conservation categories assumed that people always goes against forests. The definition “high conservation value forests” (HCVFs) differ from them because it recognises that some forests are essential to human wellbeing. The value aims protection of the livelihood and safety of local communities derived from forests - not only for “forest-dependent communities”, but also for any community that gets substantial and unique amounts of income, food or other benefits from the forest.HCV5 applies only to basic needs without other alternatives.

RATIONALE

A forest may be a HCV if local communities obtain essential fuel, food, fodder, medicines, or building materials from it, without other easy available alternatives. In these cases, the High Conservation Value is specifically identified as one or more of these basic needs.

Employment, income and products are values that have to be protected, if possible, without prejudice to other values and benefits. However, HCVs concept does not include over exploitation of the resources, even when communities are currently economically dependent on it. Over exploitation during application of traditional practices is also not tolerated, if they damage or destroy the forests and their values.

The following forests are not HCV5:

- Forests providing resources of minor importance to local communities.
- Forests providing resources that could easy be obtained elsewhere or that could be replaced by substitutes (livelihood, income from activities or subsidies – agriculture, crafts, services, industry, trade, social assistance, etc.)
- Forests providing resources that are extracted at unsustainable levels (unsustainable use, over exploitation, inappropriate activities).
- Forests providing resources obtained using a method that threat the maintenance of other HCVs.

Specific value may expand or decline over time, through changes in community needs and land use type. Specific forest, which was previously only one of many sources of supply, may become the only one, or the basic source of fuel wood or other products. The opposite can happen - the needs may decrease and disappear after a time.

In Bulgaria communities living in and adjacent to forest areas have a varying degree of dependency on forest resources. It can differ with regard to their traditions and history, but mainly with regard to their way of life, developed infrastructure, the distance to other settlements.

The assessment of alternative sources availability may be a delicate question. Communications and market access are important factors. Isolated communities are likely to have few market options and reduced access to alternative technologies to replace their forest-dependant livelihood model. Communities with easy market access and easy communication with traders and government services can easier shift to new livelihood type. However, this may be limited by access to land, technology and capital. The all factors have to be carefully considered, and if doubt appears have to be considered that people do not have accessible substitute.

Another delicate moment is to make evaluation of the extent to which the use of forest products by the communities is sustainable and consistent with protection of other HCVs. As mentioned above, unsustainable levels of extractions cannot be considered as HCVs, as well as activities that threat HCVs 1 to 3 elements, for example over exploitation, hunting or collection of endangered species. Consultations with ecological experts and sociologists are recommended in order to determine these interactions.

DEFINITION

The following resources can characterize HCV 5 in Bulgaria according to the community dependency level on them, existence of easy accessible substitutes and interaction with other HCVs:

- Firewood and wood for other daily needs
- Pasture and fodder – hay and leaf mass
- Mushrooms
- Other non-timber resources – medicinal plants, forest fruits, snails, products from hunting and others (non-timber forest products for trade including animals, resins, fruits, etc.)
- Water supply (water for drinking and for other daily needs (see HCV 4.1.)

Considering the existing sociological researches and following the implementation of a number of questionnaires and expert assessments, the present toolkit assume that as a whole the population in Bulgaria has alternatives according to exploitation and incomes from forests and therefore HCV 5 is not clearly represented in the country. However since as a substantial part of Bulgarian forests located near small and

isolated mountain settlements having a potential for HCV 5 than the managers/forest users in these regions have to check the HCV 5 availability.

IDENTIFICATION OF HCV 5

PRELIMINARY ASSESSMENT

This assessment complies with *Annex 5* from the toolkit.

If the studying forests comply with the HCV5 requirements from *Annex 5*, then the toolkit users have to consult the local authority and local community representatives (religious, tribal or other informal leaders) according to HCV 5 presence. The forest managers have to receive the statement of local authority and informal leaders about the importance of forest for the local communities livelihood.

If there is potential existence of HCV 5 according to the *Annex 5* methodology and local authority confirms this also and informal leaders statements then forest managers/users are obliged to make the full assessment for the existing HCV 5 establishment.

The full assessment for the existing HCV 5 establishment is obligatory also when there are obvious conflicts between forest manager/user and local authority.

FULL ASSESSMENT

This assessment is made according to the developed methodology in *Annex 6*.

RECOMMENDATIONS AND GUIDANCE FOR MANAGEMENT AND MONITORING OF HCV 5

The recommendations and guidance for management and monitoring of HCV 5 forests are presented also in *Annex 6*.

HCV 6. Cultural values. Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or Indigenous Peoples, identified through engagement with these local communities or Indigenous Peoples.

INTRODUCTION

As well as being essential for human livelihood and survival, forests can be crucial for cultural values of the societies and communities. This value is designed to protect the traditional culture of local communities where the forest is crucial to their identity. Thereby maintenance of cultural integrity of local communities and society as a whole is provided.

RATIONALE

A forest may be designated as HCVF when having or providing values without which the local community would suffer a severe change in culture or for which the community does not have any alternative. According to the regulations in the country, about 40 000 cultural heritage sites in Bulgaria have the status of cultural monument (immovable cultural heritage). Some of these are located in forests or are closely related to woodlands. At the same time, certain sites in woodlands are important for the cuture and the historical memory of local communities but are not classified by state authorities. Due to the specific socio-economic

conditions in Bulgaria, the development of various forms of tourism (ecotourism, educational tourism, hiking, photo-safari, etc..) that are directly related to forest areas is of key importance for many local communities, including for promoting and preserving the local traditions and culture. In this sense, HCV 6 includes forest areas that are of importance for tourism when it supports and fosters the preservation of local traditions, customs and culture.

DEFINITION

1. Forest areas within a strip of 500 m around religious sites listed in Annex 7;
2. Forest areas within a strip of 100 m around monastreries and other religious sites not listed in Annex 7 (churches, chapels, shrines, holy springs, tekkes, etc..), ancient temples, occult centers, archaeological monuments and excavations and other sites identified in consultation with local people that are important for preserving spirituality, traditions and historical and cultural memory;
3. Forest areas within a strip of 100 m around sites traditionally used for fairs, singing competitions and other events identified in consultation with local people that are important for preserving the cultural heritage and national traditions;
4. Forest areas within cultural heritage sites (cultural monuments) or within their protection areas;
5. Forest areas located in the immediate vicinity (within a 30 m strip / 15 m on either side of the trail) along officially marked hiking trails and unmarked but commonly used hiking trails;
6. Forest areas within a strip of 50 m around tourist sites, as well as forest areas of outstanding aesthetic and recreational value (including single trees or small groups of trees – e.g. venerable or remarkable trees), fountains, alcoves, educational trails and other sites important for tourism and education identified in consultation with local people and tourist groups, associations and companies active in the region.

IDENTIFICATION OF HCV 6

FULL ASSESSMENT

Identification of forest areas matching the definition of HCV 6 begins with checking whether the managed / utilized forest areas or parts of them are listed in Annex 7.

The list under Annex 7, however, should not be considered exhaustive – it needs to be updated in the course of time and users of this toolkit should therefore carry on with the next steps for identifying the existence of HCV 6 in consultation with local communities. The groups of indigenous peoples whose traditional cultural identity is linked to the forest shall be identified and their representatives shall be consulted as to any occurrence of HCV 6 in the forest!

It shall be checked whether the forest areas are within the boundaries of immovable cultural heritage sites (monuments of culture) or in their areas of protection designated under the relevant legislation (HCV 6, item 4). This can be achieved as the forest owner / operator submits an application form to the Director of the National Institute for Immovable Cultural Heritage (NIICH). Templates of application forms are available on the website of NIICH. Information about the status of a forest area under HCV 6, item 4 may be obtained from the municipality, the city-hall (Culture Department) or the local museum (of history, ethnography), as well as other institutions related to the Ministry of Culture. In any case, an official certificate shall be issued by the relevant institution, authorized to this end, which consults with the National Scientific and Documentary Archive in NIICH. It is necessary to get official information about the applicable regimes for the relevant site of immovable cultural heritage. Available information might also be obtained from the local communities, NGOs or scientific institutions.

The assessment for identifying HCV 6 can be considered complete if consultations with key representatives of the local community are undertaken to identify, among others, the sites of importance for the culture and traditions that are not explicitly listed to the state regulations.

For identifying HCV 6, item 5 and item 6, it is essential to have consultations with tourist groups, associations and companies that are active in the area. For the purpose of identifying the archaeological sites under HCV 6, item 2 and item 3, it is also necessary to have consultations with local, regional and national historical and archaeological museums, archaeological, historical and ethnographic museums, cultural

centers and institutes, community centers, mayors, informal local leaders, local historians, cultural anthrpologists and other stakeholders.

RECOMMENDATIONS AND MANAGEMENT GUIDANCE FOR HCV 6

1. Forest operations are carried out according to the regimes stipulated in the orders for promulgation of the cultural heritage monuments.
2. It is recommended that in the forests defined as HCV 6 are not conducted any operational /management activities with the exception of removal of dangerous to human safety trees.
3. If a decision is made anyway to implement management activities, those are coordinated / agreed with local community representatives and experts (cultural anthropologists, historians, an expert in tourism, etc.) in order to identify and retain key aesthetic characteristics of the forest. Activities leading to a change of the landscape value and/or decrease of the value of the forest as HCV are not implemented. Certain fellings that would reduce the aesthetic appearance of the forest near important for the culture, traditions and tourism sites are not implemented (incl. clear fellings, short-gradual fellings, fellings with great intensity). Particular attention should be paid to maintaining and possibly improving the aesthetic and protective functions of the forest by keeping the dead standing and lying trees, living single trees and groups of trees with interesting interior features, hollow trees, old trees, etc.)
4. Forest management activities are not implemented in the HCV 6 sites during the high tourist seasons and periods of holding the traditional fairs or cultural, historical and religious events of the local population.

RECOMMENDATIONS AND GUIDANCE FOR THE MONITORING OF HCV 6

1. To investigate whether the HCVF retain critical importance as defined for HCV 6 in five years (in consultation with representatives of local communities and experts (cultural anthropologists, historians, an expert in tourism, etc.).
2. To exercise annual control over the compliance of the regimes of the cultural heritage monuments that are specified in their orders.
3. To exercise annual control over the activities stipulated in forest plans and whether they comply with the recommendations and guidelines for management of designated HCV 6.
4. It is recommended that in the monitoring is included documentary check and pictures.

ANNEXES

ANNEX 1A – LIST OF ENDANGERED, THREATENED WITH EXTINCTION AND ENDEMIC PLANT SPECIES IN BULGARIA, INDICATORS FOR HIGH CONSERVATION VALUES IN FORESTS

A. Endemic, rare and endangered plant species

1. **Ground Cedar** (*Diphasiastrum complanatum* (L.) Holub) – regionally extinct, listed in BDA, occurring in various habitats having a wide range of environmental conditions, established in the Western Rhodopes.
2. **Calabrian Pine** (*Pinus brutia* Ten.) – critically endangered, listed in BDA, occurring in xerothermic habitats in the Eastern Rhodopes.
3. **Common Yew** *(Taxus baccata* L.) – endangered, listed in BDA, occurring in shady, damp places along streams, in the composition of deciduous and mixed coniferous-deciduous forests.

4. **Thracian oak** *(Quercus thracica* Stef. & Nedjalkov) – extinct, listed in BDA, endemic to Bulgaria, occurring in the Eastern Rhodopes.
5. *Quercus mestensis* (Bondev & Gancev) – critically endangered, listed in BDA, endemic to Bulgaria, occurring west of Belitsa.
6. **Kermes Oak** *(Quercus coccifera* L.) – endangered, listed in BDA.
7. **Horse Chestnut** ***(****Aesculus hippocastanum* L.) – endangered, listed in BDA, endemic to the Balkans, tertiary relict, occurring in the Eastern Balkan Mountains.
8. **Sweet Chestnut** *(Castanea sativa* Mill.) – endangered, listed in BDA, established in the Western Balkan Mountains, Belasitsa, Slavyanka, the valley of Mesta River, Pirin, Western Rhodopes.
9. **Iguana Hackberry** *(Celtis glabrata* Stev.) – endangered, tertiary relict, established in North-Eastern Bulgaria, the Danubian Plain, Eastern Balkan Mountains, Eastern Rhodopes, Thracian Lowland, Tundzha Hilly Plain, Strandzha.
10. **Alpine Buckthorn** *(Rhamnus alpina* L.) – endangered, listed in BDA.
11. **Heldreich's Maple** *(Acer heldreichii* Orph.) – vulnerable, listed in BDA, endemic to the Balkans.
12. **Bay Willow** (*Salix pentandra* L.) – critically endangered, listed in BDA, relict, established in Vitosha and in Znepole Region.
13. **Rosemary Leaved Willow** *(Salix rosmarinifolia* L.) – critically endangered, listed in BDA, established in Sofia Region.
14. *Salix xanthicola* K.I. Chr. – vulnerable, listed in BDA, endemic to the Balkans, occurring along streams in Southern Bulgaria.
15. **Caucasian Whortleberry** ***(****Vaccinium arctostaphylos* L.) – endangered, listed in the Bern Convention, listed in BDA, tertiary relict, occurring in shady forests of oriental beech and oriental durmast.
16. *Chamaecytisus frivaldszkyanus* ***(***(Degen) Kuzmanov**)** – endangered, endemic to Bulgaria, occurring in sparse oak and hornbeam forests in the regions of Pleven, Plovdiv, Lovech, Turnovo, Haskovo, Stara Zagora.
17. *Chamaecytisus kovacevii (*(Velen.) Rothm.**)** – endangered, endemic to Bulgaria, listed in BDA, occurring in sparse oak and hornbeam forests in the regions of Pleven, Ruse, Montana, Sofia, Stara Zagora.
18. **Black Currant** (*Ribes nigrum* L.) – critically endangered, listed in BDA, established in the Western Rhodopes.

19. **Webii Wild Almond** (*Amygdalus ×delipavlovii* S. Seraf) – critically endangered, listed in BDA, occurring in rocky and dry places, forming shrub communities with *Jasminum fruticans, Paliurus spina-christi, Pyrus amygdaliformis,* etc.
20. **Common Holly (***Ilex aquifolia L.***)** – endangered, listed in BDA, tertiary relict, occurring in moist and shady beech and mixed forests as undergrowth.
21. **Colhic Holly (***Ilex colchica* Pojark.) – endangered, tertiary relict, listed in BDA, occurring in the evergreen undergrowth of moist and shady forests of oriental beech.
22. **Greek Strawberry Tree** (*Arbutus andrachne* L.) – critically endangered, listed in BDA, occurring in Mediterranean low-stem shrubs and groves, mostly on rocky hillsides; established in the Rhodopes (Eastern – the villages of Dolno Lukovo, Gorno Lukovo, Mandritsa, Kostilkovo, Cherna Cherkva).
23. **Strawberry Tree** (*Arbutus unedo* L.) – critically endangered, listed in BDA, occurring in Mediterranean low-stem evergreen or deciduous shrubs and groves on rocky limestone or sandstone slopes; established in the Eastern Rhodopes and Strandzha.
24. **Small-leaved Hawthorn** (*Crataegus microphylla* C. Koch) – critically endangered, listed in BDA, occurring in dense forests within wetlands with high humidity.
25. *Asperula involucrata* (Wahlenb). – critically endangered, listed in BDA, occurring in light beech forests; established in Strandzha.
26. **Spurred Helleborine** (*Cephalanthera epipactoides* Fisch. & C.A. Mey.) – critically endangered, listed in BDA, established in the Eastern Rhodopes.
27. *Colchicum diampolis(* Delip. & Cheshm.) – critically endangered, endemic to Bulgaria, listed in BDA, occurring in glades within dense forests in the region of Yambol, Znepole, the Tundzha Hilly Plain.
28. **Lady's Slipper Orchid** (*Cypripedium calceolus* L.) – critically endangered, listed in BDA, relict, occurring in coniferous, mixed and deciduous forests, thickets and glades; established in the Rhodopes.
29. *Eranthis bulgaricus* (Stef.) – critically endangered, endemic to the Balkans, listed in BDA, occurring in deciduous forests and thickets, as well as in grasslands along the outskirts of forests.
30. **Lebanese wild apple** (*Eriolobus trilobata* (Poir.) M. Roem.) – critically endangered, listed in BDA, included in the World List of Endangered Trees as rare species. Occurring in xerothermic sparse deciduous forests and their outskirts; established in the Rhodopes.
31. **St. John's Chamomile** (*Anthemis sancti-joannis* Stoj.,Stef. & Turrill) – endangered, listed in BDA, endemic to Bulgaria, occurring in sparse beech, spruce and mixed forests in Rila, Slavyanka, and Mid Balkan Mountains.

32. *Fritillaria drenovskyi* (Degen & Stoj.) – critically endangered, listed in BDA, endemic to the Balkans, Bern Convention, glades in beech and pine forests; established in Slavyanka and Southern Pirin.
33. *Fritillaria stribrnyi* (Velen.) – critically endangered, listed in BDA, endemic to the Balkans, occurring in grassy places within sunlit low-stem deciduous forests (dominated by pubescent oak) in the regions of Plovdiv and Yambol.
34. **Round-leaved Birthwort (***Aristolochia rotunda* L**) –** endangered, listed in BDA, occurring individually in xerothermic light oak forests mainly in the Eastern Rhodopes to a limited extend in the Thracian Lowland and Struma Valley.
35. *Betonica scardica* (Griseb.**)** – endangered, listed in BDA, endemic to the Balkans, occurring in sparse oak forests in the region of Kyustendil.
36. **Green Hound`s Tongue** (*Cynoglossum germanicum* Jacq.) – endangered, listed in BDA, occurring in woody and shady places within the Mid Balkan Mountains on limestone in mixed beech and hornbeam forest.
37. **Grecian Foxglove** (*Digitalis laevigata* Waldst. & Kit.) – endangered, endemic to the Balkans, occurring in grassy and rocky places, among thickets and thinned forests of *Carpinus orientalis, Corylus avellana, Fagussylvatica, Abies alba,* and *Castanea sativa* forests.
38. **Daphne-laurel** (*Daphne laureola* L.) – endangered, listed in BDA, occurring in shady beech and fir forests.
39. **Pontic daphne** *(Daphne pontica* L.) **–** endangered, listed in BDA, preglacial relict; established in Strandzha.
40. **Violet Helleborine** ***(****Epipactis purpurata* Sm.) – endangered, listed in BDA, occurring in well preserved shady beech forests.
41. **Giant Snowdrop** ***(****Galanthus elwesii* Hook.) – endangered, listed in BDA, occurring among thickets, forests, rocky meadows on calcareous soils, in river valleys within the lowland and foothill belt on rich alluvial soils.
42. **Common Snowdrop** ***(****Galanthus nivalis* L.) **–** endangered, listed in BDA, occurring among thickets, forests, rocky meadows, in river valleys within the lowland and foothill belt on alluvial soils.
43. **Broad-leaved Bellflower** *(Campanula latifolia* L.) – endangered, listed in BDA, occurring in the Western Balkan Mountains.
44. *Galium rhodopeum* **(**Velen.) – endangered, listed in BDA, included in the Bern Convention, endemic to the Balkans, tertiary relict. Participating in the grass layer of *Quercus pubescens* and *Carpinus orientalis* communities.

45. **Bohemian Crane's-bill (***Geranium bohemicum* L.) - endangered, listed in BDA, occurring in the lower parts of the mountains in mixed deciduous forests with dominated by *Quercus petraea, Carpinus betulus, Fagus sylvatica.*
46. **Bulbous Crane's-Bill (***Geranium tuberosum* L.) - endangered, listed in BDA, occurring in oak forests.
47. **Creeping ladies tresses** (*Goodyera repens* (L.) R. Br.) – endangered, listed in BDA, relict, occurring in pine and fir forests, mixed conifer and sometimes coniferous-deciduous forests in the Balkan and Rhodope Mountains.
48. **Tutsan, Sweet Amber** (*Hypericum androsaemum* L.) – endangered, listed in BDA, occurring in moist, shady gullies in the forests of Strandzha.
49. **Creeping St. John's Wort** *(Hypericum calycinum* L.) – endangered, listed in BDA, occurring in shady gullies, thinned forests and riverbanks in Strandzha.
50. **Two-Flowered Everlasting-Pea (***Lathyrus grandiflorus* Sibth. & Sm.**)** – endangered, listed in BDA, occurring in deciduous forest communities in the region of Znepole, Osogovska Mountain, Belasitsa, Slavyanka, Rila.
51. *Lathyrus transsilvanicus* ((Spreng.) Fritsch) – regionally extinct, listed in BDA, occurring in shady oak forests on brown forest soil.
52. **Creeping-Rooted Medick** (*Medicago carstiensis* Wulfen) - endangered, listed in BDA, occurring in beech and mixed beech and chestnut forests.
53. **Wild Peony, Male Peony** *(Paeonia mascula* (L.) Mill.) - endangered, listed in BDA, relict, occurring in sunlit places within oak and oriental-hornbeam forests.
54. **Turkish Squill** *(Scilla bithynica* Boiss.) - endangered, listed in BDA, occurring in moist dense forests.
55. **Serbian Woundwort (***Stachys serbica* Pančić**)** – endangered, endemic to the Balkans, listed in BDA, occurring in sparse oak forests in the region of Kyustendil, Kardzhali and Yambol.
56. *Stachys balcanica (*P.W.Ball**)** – endangered, listed in BDA, endemic to the Balkans, occurring in gullies and dry oak forests in the Eastern and Central Rhodopes.
57. **Claspleaf Twistedstalk (***Streptopus amplexifolius* (L.) DC.**)** – endangered, listed in BDA, occurring in moist shady spots within spruce forests and shaded rocky places.
58. **Pontic Fritillary (***Fritillaria pontica* Wahlenb.) – endemic to the Balkans, occurring in various types of forests in Eastern and Southern Bulgaria.
59. **Common columbine, Granny's nightcap (***Aquilegia vulgaris* L.) – in forests and thickets.
60. **Intermediate Wintergreen (***Pyrola media* Swartz**)** – in damp shady places in forests.
61. **Eastern Sowbread (***Cyclamen coum* Miller**)** – listed in the Bern Convention, occurring in oak forests and thickets.

62. **Rhodope Toothwort (***Lathraea rhodopaea* Dingler) – endemic to the Balkans, included in the IUCN List (R), occurring in moist forests in the Rhodopes, the region of Plovdiv, Slavyanka, Belasitsa and Rila.
63. *Pyrus bulgarica (*Khutath. & Sachok.) – endemic to Bulgaria, occurring within thickets along oak forests in the Eastern Balkan Mountains, the Black Sea Coast, Lyulin, the Tundzha Hilly Plain and Strandzha.
64. **Oriental Plane (***Platanus orientalis* L.) – along rivers.
65. **Abraham-Isaac-Jacob (***Trachystemon orientalis* (L.) G. Don f.) – within forests in the Eastern Balkan Mountains, Strandzha and the Black Sea Coast.
66. *Centaurea wagenitziana (*Bancheva & Kit Tan*/C. amplifolia* auct. bulg.**)** – endemic to the Balkans, critically endangered, listed in BDA, included in the IUCN List, occurring in oak (Quercus frainetto – Quercus cerris) forests in the region of Burgas (Mandra Village).
67. **Pea Vetch, Pale-flower Vetch** (*Vicia pisiformis* L.) **–** within deciduous shrubs and forests.
68. **Great Wood Vetch** *(Vicia dumetorum* L.) – within deciduous shrubs and forests.
69. **Round-Leaved Alexander** (*Smyrnium rotundifolium* Miller) – within forests and thickets in the Struma Valley, the Eastern Rhodopes and the Tundzha Hilly Plain.

For each of these species there is available information about their distribution in Bulgaria. Toolkit users should check whether any of these species possibly occur in the region covering the forest they manage and how it looks like.

Annex 1B. LIST OF ENDANGERED, THREATENED WITH EXTINCTION AND ENDEMIC ANIMAL SPECIES IN BULGARIA, INDICATORS FOR HIGH CONSERVATION VALUES IN FORESTS AND MEASURES FOR CONSERVATION OF THEIR HABITATS

No.	Latin / Bulgarian Name	Conservation Status	Threshold	Conservation Measures
1	*Ursus arctos* Brown bear	In Bulgaria: RDB – endangered EN, BDA-II, III; International: IUCN-LC; BeC-II; CITES-II;	Existing den, inhabited at least twice in the last 10 years, or area located within a corridor providing for the natural connectivity of the population.	No operations undertaken within a radius of 300 m around the den. In case of a corridor, concerted operations could be carried out depending to the width of the corridor. Intensive logging or installation of game retention fences are not allowed in a corridor narrower than 1000 m.

		HD-II, IV		
2	*Lutra lutra* Otter	In Bulgaria: RDB- vulnerable VU; BDA-II, III; International: IUCN-NT; BeC-II; CITES-I; HD-II, IV	Existing lair	No operations allowed within a radius of 100 m around a lair (including corrections of rivers, construction of dikes, clearing of coastal vegetation, extraction of aggregates, construction works). At places, where necessary, riparian vegetation shall be restored.
3	*Lynx lynx* Lynx	In Bulgaria: RDB- critically endangered CR; BDA-II, III; International: IUCN-LC; BeC-III; HD-II, IV; CITES-II	Presence of the species and existing habitable lair	No operations undertaken within a radius of 400 m around a lair. Restricted felling in areas where presence of the species is established, as well as around and within rocky habitats suitable for building of lairs. Effective control on poaching and on the intensive use of deer populations.
4.	*Martes martes* Pine marten	In Bulgaria: RDB- endangered EN; BDA-II, III; International: IUCN-LC; HD II,V	Presence of the species	Restricted use of old forests and confined pools. Ban on the logging of old hollow trees (which are potential lairs) in areas where the presence of species is established.
5.	All the bat species	In Bulgaria: BDA-II, III; International: BeC-II; Bonn Convention and EUROBATS	Presence of the species	Ban on the logging of old hollow trees and of trees with peeled bark (potential shelters and wintering sites) in areas where the presence of bat species is established. Prohibition for storage of timber and felling debris at cave inlets. If the inlet to a cave or a crevice (potential or existing shelter for bats) is too overgrown and hinders the passage of bats, cleaning of the inlet is recommended.
6.	Western four-lined snake *Elaphe quatuorlineata*	In Bulgaria: RDB- endangered EN; BDA-II; III; International IUCN-NT; BeC-II; HD-II, IV	Presence of the species	Animals of this species shall not be collected, transferred or killed. The land that has suffered forest fires shall not be ploughed up. Subunits with undergrowth shall be left along the forest edge, if possible. Ecotone zones (zones between forest and open areas) shall not be cleared from shrubs.
7.	Blotched snake *Elaphe sauromates*	In Bulgaria: RDB- endangered EN; BDA-II; III; International BeC-II; HD-II, IV	Presence of the species	Animals of this species shall not be collected, transferred or killed. The land that has suffered forest fires shall not be ploughed up. Subunits with undergrowth shall be left along the forest edge, if possible. Ecotone zones (zones between forest and open areas) shall not be cleared from shrubs.
8.	Leopard snake	In Bulgaria: RDB- endangered EN;	Presence of the species	Animals of this species shall not be collected, transferred or killed. The land that has suffered forest fires shall not be

	Zamenis situla	BDA-II; III; International IUCN-LC; BeC-II; HD-II, IV		ploughed up. Subunits with undergrowth shall be left along the forest edge, if possible. Ecotone zones (zones between forest and open areas) shall not be cleared from shrubs.
9.	European pond turtle *Emys orbicularis*	In Bulgaria: BDA-II; III; International IUCN-NT; BeC-II; HD-II, IV	Presence of the species	Animals of this species shall not be collected, transferred or killed. No felling shall be undertaken in forests within a radius of at least 50 m around water bodies where the presence of species is registered. Water bodies used by the species shall not be drained up. Fallen decaying trees within a radius of at least 50 m around the water bodies where the presence of species is registered shall not be removed.
10	Balkan pond turtle *Mauremys rivulata*	In Bulgaria: RDB-vulnerable VU; BDA-II; III; International BeC-II; HD-II, IV	Presence of the species	Animals of this species shall not be collected, transferred or killed. No felling shall be undertaken in forests within a radius of at least 50 m around water bodies where the presence of species is registered. Water bodies used by the species shall not be drained up. Fallen decaying trees within a radius of at least 50 m around the water bodies where the presence of species is registered shall not be removed.
11.	Hermann's tortoise *Testudo hermanni*	In Bulgaria: RDB-endangered EN; BDA-II; III; International IUCN-NT; BeC-II;CITES-II HD-II, IV	Presence of the species	Animals of this species shall not be collected, transferred or killed. The land that has suffered forest fires shall not be ploughed up. Subunits with undergrowth shall be left along the forest edge, if possible. Ecotone zones (zones between forest and open areas) shall not be cleared from shrubs.
12.	Spur-thighed tortoise *Testudo graeca*	In Bulgaria: RDB-endangered EN; BDA-II; III; International IUCN-VU; BeC-II;CITES-II HD-II, IV	Presence of the species	Animals of this species shall not be collected, transferred or killed. The land that has suffered forest fires shall not be ploughed up. Subunits with undergrowth shall be left along the forest edge, if possible. Ecotone zones (zones between forest and open areas) shall not be cleared from shrubs.
13	*Triturus cristatus* Northern crested newt	In Bulgaria: RDB-vulnerable VU; BDA-III; International IUCN-LC; BeC-II; HD-II, IV	Presence of the species	Animals of this species shall be kept safe from injury or killing. No felling shall be undertaken in forests within a radius of at least 50 m around water bodies where the presence of species is registered. Water bodies used by the species shall not be drained up.
14	*Triturus Dobrogicus*	In Bulgaria: RDB-vulnerable VU; BDA-III; International	Presence of the species	Animals of this species shall be kept safe from injury or killing. No felling shall be undertaken in forests within a radius of at least 50 m around water bodies where the presence of species is registered.

	Danube crested newt	IUCN-LC; BeC-II; HD-II, IV		Water bodies used by the species shall not be drained up
15	Balkan-Anatolian crested newt *Triturus ivanbureschi*	In Bulgaria: BDA-II; III; International IUCN-LC; BeC-II; HD-II, IV	Presence of the species	Animals of this species shall be kept safe from injury or killing. No felling shall be undertaken in forests within a radius of at least 50 m around water bodies where the presence of species is registered. Water bodies used by the species shall not be drained up.
16	Macedonian crested newt *Triturus macedonicus*	In Bulgaria: BDA- III; International IUCN-LC; BeC-II; HD-II, IV	Presence of the species	Animals of this species shall be kept safe from injury or killing. No felling shall be undertaken in forests within a radius of at least 50 m around water bodies where the presence of species is registered. Water bodies used by the species shall not be drained up.
17	European fire-bellied toad *Bombina bombina*	In Bulgaria: BDA-II; III; International: IUCN-LC; BeC-II; HD-II, IV	Presence of the species	Animals of this species shall be kept safe from injury or killing. No felling shall be undertaken in forests within a radius of at least 50 m around water bodies where the presence of species is registered. Water bodies used by the species shall not be drained up.
18	Yellow-bellied toad *Bombina variegata*	In Bulgaria: BDA-II; III; International IUCN-LC; BeC-II; HD-II, IV	Presence of the species	Animals of this species shall be kept safe from injury or killing. No felling shall be undertaken in forests within a radius of at least 50 m around water bodies where the presence of species is registered. Water bodies used by the species shall not be drained up.
19	*Phalacrocorax pygmeus* Pygmy cormorant	In Bulgaria: RDB-endangered EN; BDA-II, III; International: IUCN-NT;BeC-II; BoC-II	Presence of the species Nesting site	No felling shall be undertaken in forests within a radius of at least 200 m around water bodies where the presence of species is registered. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 01.04 – 01.08. No shooting of specimens shall be allowed.
20	*Plegadis falcinellus* Glossy ibis	In Bulgaria: RDB- critically endangered CR, BDA-II, III; International: BeC-II; BoC-II	Presence of the species Nesting site	No felling shall be undertaken in forests within a radius of at least 200 m around water bodies where the presence of species is registered. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 01.04 – 01.09. No shooting of specimens shall be allowed.
21	All the rest species of herons and great cormorant, colonies of more than 5 nests		Presence of the species Nesting site	No felling shall be undertaken in forests within a radius of at least 200 m around water bodies where the presence of species is registered. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 01.04 – 01.09. No shooting of specimens of these species shall be allowed.
22	*Platalea leucorodia* Spoonbill	In Bulgaria: RDB- critically endangered CR; BDA-II, III (I); International:	Presence of the species Nesting site	No felling shall be undertaken in forests within a radius of at least 200 m around water bodies where the presence of species is registered. No operations shall be carried out within a radius of 300 m around nests of the species in the

		IUCN-LC; BeC-II, BoC-II; CITES-II,		nesting season 01.04 – 01.09. No shooting of specimens shall be allowed.
23	*Ciconia nigra* Black stork	In Bulgaria: vulnerable VU; BDA-II, III; International: IUCN-LC; BeC-II; CITES-II; BoC-II	Presence of the species Nesting site	Large old trees to be retained in the units where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 500 m around nests of the species in the nesting season 15.03 – 01.09. Durnig the rest of the year the felling exclusion zone shall be with a radius of 200 m. No intensive fellings shall be undertaken in subunits where nests of the species are registered.
24	*Aquila clanga* Greater spotted eagle	In Bulgaria: RDB- critically endangered CR; BDA-II; III (I); International: IUCN-VU; BeC-II; CITES-II; БоК-II	Nesting site	Large old trees to be retained in the units where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 500 m around nests of the species in the nesting season 01.03 – 01.08. Durnig the rest of the year the felling exclusion zone shall be with a radius of 200 m. No intensive fellings shall be undertaken in subunits where nests of the species are registered.
25	*Aquila heliaca* Eastern imperial eagle	In Bulgaria: critically endangered CR; BDA–II, III; International: IUCN-VU; BeC-II; CITES-I; BoC-II.	Occupied territory or nesting site	Large old trees shall be retained along the forest edge in the units where presence of the species is registered, for such trees are potential nesting sites. A considerable part of the nests of imperial eagles in the lower areas are on poplars, since these are usually the only tall trees surviving in the surroundings. No operations shall be carried out within a radius of 500 m around nests of the species in the nesting season 01.03 – 01.09. Durnig the rest of the year the felling exclusion zone shall be with a radius of 200 m.
26	*Aegypius monachus* Cinereous vulture	In Bulgaria: RDB-extinct EX (as nesting sp.); BDA-II, III; International: IUCN-NT; BeC-II; CITES-II, BoC-II	Nesting site	Large old trees to be retained in the units where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 500 m around nests of the species in the nesting season 15.02 – 01.08. Durnig the rest of the year the felling exclusion zone shall be with a radius of 200 m. No intensive fellings shall be undertaken in subunits where nests of the species are registered.
27	*Scolopax rusticola* Woodcock	In Bulgaria: RDB-endangered EN, BDA-IV; International: IUCN-LC; BeC-II	Occupied territory or nesting site	Since this species nests on the ground, it is very vulnerable during brooding. In the nesting season (01.04 – 01.08) no operations shall be undertaken in sections where presence of the species is registered. It is recommended to set up such sections as old growth forests.
28	*Bonasia*	In Bulgaria	Nesting site	Since this species often nests on the ground, it is very vulnerable during brooding. In the nesting

	bonasia Hazel grouse	BDA –II, III		season (01.04 – 01.08) no operations shall be undertaken in sections where presence of the species is registered.
29	*Pandion haliaetus* Osprey	In Bulgaria: RDB- critically endangered CR; BDA-III; International: IUCN-VU, BeC-II; BoC-I, II; CITES-I	Occupied territory or nesting site	Large old trees shall be retained near water bodies where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 500 m around nests of the species in the nesting season 01.03 – 01.08. Durnig the rest of the year the felling exclusion zone shall be with a radius of 200 m.
30	*Milvus migrans* Black kite	In Bulgaria: RDB-critically endangered CR; BDA-II-III; International:, IUCN-LC; BeC-II, BoC-II	Occupied territory or nesting site	Large old trees shall be retained (especially near water bodies) where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 200 m around nests of the species in the nesting season 01.03 – 01.08. Durnig the rest of the year the felling exclusion zone shall be with a radius of 150 m.
31	*Haliaeetus albicilla* White tailed eagle	In Bulgaria: RDB-vulnerable VU; BDA-II, III; International: IUCN-LC; BeC-II; CITES-I; BoC-II	Occupied territory or nesting site	Large old trees shall be retained near water bodies where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 500 m around nests of the species in the nesting season 01.03 – 01.08. Durnig the rest of the year the felling exclusion zone shall be with a radius of 300 m.
32	*Accipiter brevipes* Levant sparrowhawk	In Bulgaria: RDB-vulnerable VU; BDA–II; International: IUCN-LC;; BeC-II, CITES-II; BoC-II	Occupied territory or nesting site	Trees with nests and large old trees shall be retained in the units where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 01.03 – 01.08. Durnig the rest of the year the felling exclusion zone shall be with a radius of 150 m. No intensive fellings shall be undertaken in subunits where nests of the species are registered.
33	*Accipiter gentilis* Northern goshawk	In Bulgaria: RDB-endangered, BDA-III; International: BeC-II, CITES-II, BoC-II.	Occupied territory or nesting site	
34	*Accipiter nisus* Eurasian sparrowhawk	In Bulgaria: RDB-endangered International: BeC-II, CITES-II, BoC-II, BDA-III.	Occupied territory or nesting site	

35	*Hieraaetus pennatus* Booted eagle	In Bulgaria: RDB-vulnerable VU; BDA-III; International: IUCN- LC; BeC-III; CITES-II; BoC-II	Occupied territory or nesting site	Trees with nests and large old trees shall be retained in the units where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 01.03 – 01.08. No intensive fellings shall be undertaken in subunits where nests of the species are registered.
36	*Aquila pomarina* Lesser spotted eagle	In Bulgaria: RDB-vulnerable VU; BDA-III; International: IUCN- LC; BeC-II; BoC-I, II, CITES-II	Occupied territory or nesting site	Trees with nests and large old trees shall be retained along the forest edge and in the units where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 01.03 – 01.08. Durnig the rest of the year the felling exclusion zone shall be with a radius of 150 m. No intensive fellings shall be undertaken in subunits where nests of the species are registered.
37	*Aquila chrysaetos* Golden eagle	In Bulgaria: RDB-vulnerable VU; BDA-II, III; International: IUCN- LC; BeC-II; CITES-II; BoC-II.	Occupied territory or nesting site	Trees with nests and large old trees shall be retained in the units where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 500 m around nests of the species (including nests on rocks) in the nesting season 01.03 – 01.09. Durnig the rest of the year the felling exclusion zone shall be with a radius of 300 m. No intensive fellings shall be undertaken in subunits where nests of the species are registered.
38	*Circaetus gallicus* Short-toed eagle	In Bulgaria: RDB-vulnerable VU; BDA-II; International: IUCN- LC; BeC-II, CITES-II; BoC-II.	Occupied territory or nesting site	Highly branched trees, trees with nests and large old trees shall be retained along the forest edge and in the units where presence of the species is registered, for such trees are potential nesting sites. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 01.03 – 01.09. No intensive fellings shall be undertaken in subunits where nests of the species are registered.
39	*Falco cherrug* Saker falcon	In Bulgaria: RDB- critically endangered CR; BDA-III; International: IUCN – EN; BeC-III; CITES-II; BoC-II.	Occupied territory or nesting site	Old and highly branched trees, as well as trees with nests (including nests of other species, since the saker falcon often uses old nests of other birds) shall be retained along the forest edge and in the units where presence of the species is registered. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 15.02 – 01.08. Durnig the rest of the year the felling exclusion zone shall be with a radius of 150 m. No intensive fellings shall be undertaken in subunits where nests of the species

				are registered.
40	*Falco subbuteo* Eurasian hobby	<u>In Bulgaria:</u> RDB - vulnerable, BDA-II, III; <u>International:</u> <u>BeC-II, CITES-II, BoC-II.</u>	Nesting site	Trees with nests (including nests of other species, e.g. crows) shall be retained along the forest edge and in the units where presence of the species is registered. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 01.04 – 01.08. The species is rare because of the loss of a large part of riparian forest habitats in the country. It is recommended to designate the habitats of this species as old growth forests.
41	*Pernis apivorus* European honey buzzard	<u>In Bulgaria</u> <u>RDB</u>	Occupied territory or nesting site	Old and highly branched trees, as well as trees with nests (including nests of other species, since the European honey buzzard often uses old nests of other birds, such as crows) shall be retained in the units where presence of the species is registered. No operations shall be carried out within a radius of 200 m around nests of the species in the nesting season 01.03 – 01.08.
42	*Buteo rufinus* Long-legged buzzard	<u>In Bulgaria:</u> vulnerable, BDA-II, III; <u>International:</u> IUCN-VU; ECS–spec 3, endangered; BD-I; CITES-II; BeC-II; BoC-II.	Occupied territory or nesting site	Old and highly branched trees, as well as trees with nests shall be retained in the units where presence of the species is registered. No operations shall be carried out within a radius of 300 m around nests of the species (including nests on rocks) in the nesting season 01.03 – 01.08.
43	*Falco vespertinus* Red-footed falcon	<u>In Bulgaria</u>: RDB- critically endangered CR; BDA-III; <u>International</u>: IUCN - NT; CITES-II, BeC-II; BoC-II,	Occupied territory or nesting site	Trees with nests (including nests of other species, e.g. crows) shall be retained along the forest edge and in the units where presence of the species is registered. No operations shall be carried out within a radius of 300 m around nests of the species in the nesting season 01.04 – 01.09.
44	*Columba oenas* Stock dove	<u>In Bulgaria</u>: RDB-endangered EN; BDA-III. <u>International</u>: IUCN- LC;	Occupied territory or nesting site	In the nesting season (15.03 – 15.08) No operations shall be carried out in the units where presence of the species is registered. Old hollow trees, even in younger plantations, shall be retained. It is recommended to designate the habitats of this species as old growth forests.
45	*Aegolius funereus*	<u>In Bulgaria</u>: RDB-vulnerable	Occupied territory or nesting site	No operations shall be carried out in the nesting seasons of Ural owl and Eurasian eagle-owl (01.03. – 01.07.), Boreal owl and Eurasian pygmy

	Boreal owl	VU; BDA-II, III, <u>International</u>: IUCN- LC; CITES-II, BD, BeC-II		owl (01.04. – 01.07.) in the subunits where presence of the species is registered. No sanitary fellings shall be undertaken in these subunits, except in case of major natural disturbances or proven calamity. When forestry operations are carried out in these and in neighboring subunits, trees with hollows shall be retained as being potential nesting sites. It is recommended to designate the habitats of this species as old growth forests.
46	*Glaucidium passerinum* Eurasian pygmy owl	<u>In Bulgaria</u>: RDB-endangered EN; BDA-II, III; <u>International</u>: IUCN- LC; ДПІ-I, BeC-II, CITES-II	Occupied territory or nesting site	
47	*Strix uralensis* Ural owl	<u>In Bulgaria</u>: RDB-endangered EN; BDA-II, III; <u>International</u>: IUCN- LC; BeC-II; CITES-II	Occupied territory or nesting site	
48	*Bubo Bubo* Eurasian eagle-owl	<u>In Bulgaria:</u> RDB - endangered, BDA-II, III; <u>International:</u> ECS-spec 3, BeC-II, BD-I, CITES-II.	Occupied territory or nesting site	
49	*Dendrocopos leucotos* White-backed woodpecker	<u>In Bulgaria</u>: RDB-endangered EN; BDA–II, III; <u>International</u>: IUCN- LC; BeC-II.	Occupied territory or nesting site	During the nesting season (01.02. – 01.07) no operations shall be carried out in the subunits where presence of the species is registered. No sanitary fellings shall be undertaken nor dry and fallen debris taken off these subunits, except in case of major natural disturbances or proven calamity. When forestry operations are carried out in these and in neighboring subunits, all standing and fallen dead trees, trees with hollows, as well as trees with visible signs of disease and decay shall mandatorily be retained. Certain parts of the plantations shall mandatorily be retained as 'islands of old age' (where no forestry operations take place). It is recommended to designate the habitats of this species as old growth forests.
50	*Picoides tridactylus* Eurasian three-toed woodpecker	<u>In Bulgaria:</u> RDB-endangered EN; BDA-II, III; <u>International</u>: IUCN- LC; BeC-II.	Occupied territory or nesting site	
51	*Dendrocopos medius*	<u>In Bulgaria:</u>	Occupied territory or nesting site	

	Middle spotted woodpecker	BDA-II International: IUCN- LC		
52	*Picus canus* Grey-faced woodpecker	In Bulgaria: RDB- endangered BDA-II, III; International: BD-I; BeC-II.	Occupied territory or nesting site	
53	*Dryocopus martius* Black woodpecker	In Bulgaria: RDB - vulnerable; BDA-II, III; International: BD-I; BeC-II.	Occupied territory or nesting site	
54	*Ficedula parva* Red-breasted flycatcher	In Bulgaria: RDB- vulnerable VU; BDA-II, III; International: IUCN- LC; BeC-II	Occupied territory or nesting site	During the nesting season (01.05. – 15.08) no operations shall be carried out in the subunits where presence of the species is registered. The species is migratory and nests in hollows. Trees with hollows shall be retained, even in younger plantations. Such trees near rivers are of essential significance. It is recommended to designate the habitats of this species as old growth forests.
55	*Ficedula semitorquata* Semi-collared flycatcher	In Bulgaria: RDB	Occupied territory or nesting site	
56	*Muscicapa striata* Spotted flycatcher	In Bulgaria: BDA-III	Occupied territory or nesting site	
57	*Phoenicurus phoenicurus* Common redstart	In Bulgaria: RDB	Occupied territory or nesting site	During the nesting season (15.05. – 15.08) no operations shall be carried out in the subunits where presence of the species is registered. The species is migratory and nests in hollows. Trees with hollows shall be retained, even in younger plantations. It is recommended to designate the habitats of this species as old growth forests.
58	*Carabus intricatus* (Linnaeus) Blue ground	International: IUCN - NT; CORINE	***Final Assessment*** presence of the species	Ban on clearing of riparian forests, uprooting of stumps and modifying of the hydrological balance of rivers. Ban on conversion of deciduous plantations to conifer.

	beetle			
59	*Lucanus cervus* (Linnaeus) Stag beetle	<u>In Bulgaria:</u> BDA - II, III <u>International</u>: HD - II; IUCN European Red List of Saproxylic Beetles - NT; BC - III	**Initial Assessment** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
60	*Propomacrus bimucronatus* (Pallas) European long-armed beetle	<u>In Bulgaria:</u> RDB - endangered (EN) <u>International</u>: IUCN European Red List of Saproxylic Beetles -NT	***Final Assessment*** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
61	*Gnorimus nobilis nobilis* (Linnaeus) Noble chafer	<u>International</u>: IUCN European Red List of Saproxylic Beetles - LC	***Final Assessment*** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
62	*Gnorimus variabilis* (Linnaeus) Variable chafer	<u>International</u>: IUCN European Red List of Saproxylic Beetles - VU	***Final Assessment*** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
63	*Osmoderma eremita* (Scopoli) Hermit beetle	<u>In Bulgaria:</u> RDB - endangered (EN); BDA - II, III <u>International</u>: HD - II, IV; IUCN - VU; IUCN European Red List of Saproxylic Beetles - NT; BC - II; CORINE	***Final Assessment*** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees (mostly trees with hollows); marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
64	*Cucujus*	<u>International</u>:	***Final Assessment*** presence of the	Identification and retention of old growth forests and islands of old age and their conservation and

	cinnaberinus (Scopoli) Red flat bark beetle	HD - II, IV; IUCN - VU; IUCN European Red List of Saproxylic Beetles - NT; BC - II; CORINE	species	exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps and logging of standing dead trees. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
65	*Triplax* spp. Fungus beetles	<u>International</u>: IUCN European Red List of Saproxylic Beetles	***Final Assessment*** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees (mostly covered by tree fungi), marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
66	*Ergates faber* (Linnaeus) Long-horned beetle	<u>International</u>: IUCN European Red List of Saproxylic Beetles - LC	***Final Assessment*** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
67	*Prionus besicanus* Fairmaire Tile-horn beetle	<u>International</u>: IUCN European Red List of Saproxylic Beetles - DD	**Initial Assessment** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
68	*Prionus coriarius* (Linnaeus) Tanner beetle	<u>International</u>: IUCN European Red List of Saproxylic Beetles - LC	**Initial Assessment** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
69	*Cerambyx cerdo* Linnaeus Great capricorn beetle	<u>In Bulgaria:</u> BDA - II, III <u>International</u>: HD - II, IV; IUCN - VU; IUCN European Red List of Saproxylic Beetles - NT; BC - II; CORINE	**Initial Assessment** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
70	*Rosalia alpina* (Linnaeus)	<u>In Bulgaria:</u> BDA - II, III	**Initial Assessment** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of

	Rosalia longicorn	International: HD - II, IV; IUCN - VU; IUCN European Red List of Saproxylic Beetles - LC; BC - II; CORINE		future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
71	*Morimus asper funereus* (Mulsant) European lon ghorn beetle	In Bulgaria: BDA - II International: HD - II; IUCN Red List of Threatened Species - VU; CORINE	**Initial Assessment** presence of the species	Identification and retention of old growth forests and islands of old age and their conservation and exclusion from forestry operations. Ban on felling of biotope trees; marking and conservation of future ones. Ban on uprooting of stumps. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
72	*Eriogaster catax* (Linnaeus, 1758) Eastern eggar	In Bulgaria: BDA – II International: HD – II, IV; BeC II; IUCN Red List of Threatened Species - DD	**Initial Assessment** presence of the species	Conservation of shrub vegetation and undergrowth. Ban on replacement of deciduous plantations with conifer and non-typical species. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
73	*Perisomena caecigena* (Kupido, 1825) Autumn emperor moth	In Bulgaria: BDA – II International: CORINE newly proposed	**Initial Assessment** presence of the species	Ban on replacement of deciduous plantations with conifer and non-typical species. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
74	*Dolbina elegans* (A. Bang-Haas, 1912) Ash hawkmoth	International: CORINE newly proposed	**Initial Assessment** presence of the species	Ban on replacement of deciduous plantations with conifer and non-typical species. Development of fire prevention and fire control plans. Prohibition for drainages and modification of water balance. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
75	*Apatura metis* Freyer, 1829 Freyer's purple emperor	In Bulgaria: BDA – II; Main Regions for Butterflies in Bulgaria International: CORINE; HD – IV; BeC II; Red Data Book of European Butterflies	**Initial Assessment** presence of the species	Conservation of riparian forests and willow-groves. Ban on replacement of deciduous plantations with conifer and non-typical species. Development of fire prevention and fire control plans. Prohibition for drainages and modification of water balance. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
76	*Euphydryas maturna* (Linnaeus, 1758)	In Bulgaria: BDA – II; Main Regions for Butterflies in	**Initial Assessment** presence of the species	Conservation of shrub vegetation and undergrowth. Ban on replacement of deciduous plantations with conifer and non-typical species. Development of fire prevention and fire control

	Scarce fritillary	Bulgaria; RDB „vulnerable“. <u>International</u>: HD – II, IV; BeC II; Red Data Book of European Butterflies VU/LC; IUCN - DD		plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
77	*Desertobia ankeraria* (Staudinger, 1861)	<u>International</u>: HD – II, IV.	**Initial Assessment** presence of the species	Ban on replacement of deciduous plantations with conifer and non-typical species. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
78	*Dioszeghyana schmidtii* (Diószeghy, 1935) Carpathian quaker	<u>In Bulgaria:</u> BDA – II <u>International</u>: HD – II, IV	**Initial Assessment** presence of the species	Conservation of shrub vegetation and undergrowth. Ban on replacement of deciduous plantations with conifer and non-typical species. Development of fire prevention and fire control plans. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
79	*Euplagia quadripunctaria* (Poda, 1761) Jersey tiger	<u>In Bulgaria:</u> BDA – II <u>International</u>: HD – II, priority species	**Initial Assessment** presence of the species	Conservation of shrub vegetation and undergrowth. Ban on replacement of deciduous plantations with conifer and non-typical species. Development of fire prevention and fire control plans. Prohibition for drainages and modification of water balance. Ban on the use of insecticides (unless extremely necessary, at that only biological and species-specific).
80	*Carabus intricatus* (Linnaeus) Blue ground beetle	<u>International</u>: IUCN - NT; CORINE	***Final Assessment*** presence of the species	Prohibition for felling of riparian forests, uprooting of stumps and modifying of the hydrological balance of rivers. Ban on conversion of deciduous plantations to conifer.

<u>Abbreviations</u>:
RDB – Red Data Book of Bulgaria, 2011, Category of threatened species: Critically Endangered (CR); Endangered (EN); Vulnerable (VU) – Vulnerable; Near Threatened (NT); Least Concern (LC); Data Deficient (DD); Not Evaluated (NE).
BDA – Biological Diversity Act, with relevant appendices the species is listed in (e.g. II, III);
IUCN – International Union for Conservation of Nature, Category of threatened species: Critically Endangered (CR); Endangered (EN); Vulnerable (VU) – Vulnerable; Near Threatened (NT); Least Concern (LC); Data Deficient (DD); Not Evaluated (NE).
BeC – Bern Convention with relevant appendices the species is listed in (e.g. II, III);
BoC – Bonn Convention on Migratory Species with relevant appendices the species is listed in (e.g. II, III);
CITES – Washington Convention II; HD-II, IV
HD – Habitats Directive with appendices the species is listed in
BD – Birds Directive with appendices the species is listed in

ANNEX 2 – LIST FOR IDENTIFYING CRITICAL CONCENTRATIONS OF SPECIES IN BULGARIA AND PERIMETER OF NON-DISTURBANCE AREAS

Roosting of:

Black vultures	more than 5 birds use an area of 500 meters around the roosting sites at least 30 days per year;
Imperial eagles	more than 3 birds use an area of 300 meters around the roosting sites at least 30 days per year;
Pygmy cormorant	more than 15 birds use an area of 300 meters around the roosting sites at least 30 days per year;
Herons (all species)	more than 30 birds use an area of 200 meters around the roosting sites at least 30 days per year;
Storks and birds of prey	more than 100 birds use an area of 300 meters around the roosting sites at least 30 days per year.

Occurrence and colonies of bats in forest areas:

All species of bats	more than 20 specimens, area of 100 meters around the sites (crevices in rocks, in caves and hollow trees)

Occurrence, wintering sites and breeding ponds for amphibians in forest areas:

Frogs, toads and salamanders	more than 10 speciments use the pond for breeding; area of 50 meters around the water body;
Aquatic turtles	more than 4 specimens use the pond; area of 100 meters around the water body;
Terrestrial tortoises	locality with more than 4 specimens within an area of 50 x 50 meters
Snakes	more than 4 specimens or more than 4 sheddings; area of 100 meters from the locality

Existing courting grounds of capercaillie (*Tetrao urogallus*) with 2-5 male birds; area of 500 m
Existing courting grounds with more than 5 courting males; area of 700 m

Areas where more than two bears congregate for feeding (not counting the yearlings and two-year-old bears); area of 500 m

Areas where traces of lynx, otter or marten are often found or the species are directly observed; area of 500 m in diameter

Rutting areas of deers (*Cervus elaphus*) – all the rutting sites; area – the whole subunit where the rutting site is located.

Areas of invertebrate congregations – areas with old hollow trees, dead standing and fungi covered trees – namely the trees are the area where non-disturbance shall be ensured.

ANNEX 3 – LIST WITH THE HCV2 FOREST AREAS IN BULGARIA

The HCV 2 forests occupy territory defined in 8 big forest areas part of 13 Regional Forestry Boards (RFB) and 98 State Forestry Management Units (SFMU). The list with all this areas is given in Table 1.

Table 1

RFB	*SFMU*
RFB Blagoevgrad	SGBS "Dikchan" – Satovcha village
RFB Blagoevgrad	SGBS"Razlog" - Razlog
RFB Blagoevgrad	SFMU Belitza
RFB Blagoevgrad	SFMU Blagoevgrad
RFB Blagoevgrad	SFMU Gotze Delchev
RFB Blagoevgrad	SFMU Dobrinishte
RFB Blagoevgrad	SFMU Eleshnitza
RFB Blagoevgrad	SFMU Katuntzi
RFB Blagoevgrad	SFMU Kresna
RFB Blagoevgrad	SFMU Mesta
RFB Blagoevgrad	SFMU Sandanski
RFB Blagoevgrad	SFMU Simitli
RFB Blagoevgrad	SFMU Tzaparevo
RFB Blagoevgrad	SFMU Yakoruda
RFB Blagoevgrad	NP Pirin
RFB	*SFMU*
RFB Burgas	SGBS "Nesebar" - Nesebar
RFB Burgas	SGBS "Gramatikovo"
RFB Burgas	SFMU Zvezdetz
RFB Burgas	SFMU Kosti
RFB Burgas	SFMU Malko Tarnovo
RFB Burgas	SFMU Staro Oriahovo
RFB Burgas	SFMU Tzarevo
RFB	*SFMU*
RFB Varna	SGBS "Sherba" – G. Chiflik
RFB Varna	SGBS Tervel
RFB Varna	SFMU Smiadovo
RFB Varna	SFMU Tzonevo
RFB	*SFMU*
RFB Veliko Tarnovo	SGBS "Rositza" – Lagat area
RFB Veliko Tarnovo	SFMU Buinovtzi
RFB Veliko Tarnovo	SFMU Veliko Tarnovo
RFB Veliko Tarnovo	SFMU Gabrovo
RFB Veliko Tarnovo	SFMU Gorna Oriahovitza
RFB Veliko Tarnovo	SFMU Plachkovtzi
RFB	*SFMU*
RFB Kyustendil	SFMU Dupnitza
RFB Kyustendil	SFMU Rilksi manastir
RFB	*SFMU*
RFB Lovetch	SGBS "Rusalka" - Apriltzi
RFB Lovetch	SFMU Borima
RFB Lovetch	SFMU Lesidren
RFB Lovetch	SFMU Ribaritza
RFB Lovetch	SFMU Teteven
RFB Lovetch	SFMU Troyan

RFB Lovetch	SFMU Cherni Vit
RFB Lovetch	SFMU Cherni Osam
RFB	*SFMU*
RFB Pazardzhik	SGBS "Beglika" – Beglika area
RFB Pazardzhik	SGBS "Borovo" – V. Poljana area
RFB Pazardzhik	SGBS "Rakitovo" - Rakitovo
RFB Pazardzhik	SGBS “Alabak” - Velingrad
RFB Pazardzhik	SFMU Batak
RFB Pazardzhik	SFMU Belovo
RFB Pazardzhik	SFMU Pazardzhik
RFB Pazardzhik	SFMU Panagyurishte
RFB Pazardzhik	SFMU Peshtera
RFB Pazardzhik	SFMU Selishte
RFB Pazardzhik	SFMU Chehlyovo
RFB Pazardzhik	SFMU Shiroka Poljana
RFB	*SFMU*
RFB Plovdiv	SGBS "Kormisosh" - Laki
RFB Plovdiv	SGBS "Chekeritza" – Strjama village
RFB Plovdiv	SFMU Asenovgrad
RFB Plovdiv	SFMU Karlovo
RFB Plovdiv	SFMU Klisura
RFB Plovdiv	SFMU Krichim
RFB Plovdiv	SFMU Rozino
RFB Plovdiv	SFMU Hisar
RFB	*SFMU*
RFB Rousse	SGBS "Karakuz" - Dulovo
RFB Rousse	SGBS "Seslav" - Kubrat
RFB Rousse	SFMU Voden
RFB Rousse	SFMU Isperih
RFB Rousse	SFMU Razgrad
RFB Rousse	SFMU Silistra
RFB	*SFMU*
RFB Sliven	SGBS "Kotel" - Kotel
RFB Sliven	SFMU Kipilovo
RFB Sliven	SFMU Nova Zagora
RFB Sliven	SFMU Sliven
RFB Sliven	SFMU Stara Reka
RFB Sliven	SFMU Tvarditza
RFB Sliven	SFMU Ticha
RFB	*SFMU*
RFB Smolyan	SFMU Devin
RFB Smolyan	SFMU Dospat
RFB Smolyan	SFMU Mihalkovo
RFB Smolyan	SFMU Rhodope
RFB Smolyan	SFMU Pamporovo
RFB Smolyan	SFMU Slaveino
RFB Smolyan	SFMU Smolyan
RFB Smolyan	SFMU Hvoyna
RFB Smolyan	SFMU Chepelare
RFB Smolyan	SFMU Shiroka laka
RFB	*SFMU*
RFB Sofia	SFMU "Aramlietz" – Elin Pelin
RFB Sofia	SFMU Borovetz
RFB Sofia	SFMU Ihtiman
RFB Sofia	SFMU Kostenetz

RFB Sofia	SFMU Pirdop
RFB Sofia	SFMU Samokov
RFB	*SFMU*
RFB Stara Zagora	SFMU Gurkovo
RFB Stara Zagora	SFMU Kazanlak
RFB Stara Zagora	SFMU Stara Zagora
RFB Stara Zagora	SFMU Chirpan
RFB	*SFMU*
RFB Shoumen	SGBS "Veliki Preslav"
RFB Shoumen	SFMU Varbitza
RFB Shoumen	SFMU Smyadovo

ANNEX 4 – LIST OF ENDANGERED, THREATENED WITH EXTINCTION OR ENDEMIC ECOSYSTEMS IN BULGARIA

No.	EUNIS	Name	Brief Description*
1	**G1.1112**	**Eastern European poplar-willow forests**	Riparian, most often mixed willow-poplar or only willow or poplar forests in lowlands and plains associated with the continental climatic conditions in North Bulgaria.
2	**G1.1216**	**Balkan Range grey alder galleries**	Mountain galleries dominated by white (grey) alder (Alnus incana), developing on alluvial soils along rivers in the mid-mountain fir-beech vegetation belt at altitudes that are higher compared to the similar forests of common alder and common ash.
3	**G1.2116**	**Dacio-Moesian ash-alder woods**	Mixed riparian gallery communities with common alder (Alnus glutinosa) as the main edificator. At places edificators and co-edificators are the grey alder (Alnus incana), oriental plane (Platanus orientalis) and common ash (Fraxinus excelsior). Different willow species, most often fragile willow (Salix fragilis) and white willow (S. alba) also participate in the community. This type of gallery forests occurs more often in the low mountain belt and more rarely in the mid-mountain belt.
4	**G1.2232 (0)**	**Helleno-Balkanic ash-oak-alder forests (Longos forests) s**	Floodplain dense forests composed of English oak (Quercus robur), narrow-leafed ash (Fraxinus angustifolia subsp. oxycarpa) and field elm (Ulmus minor) with the presence of climbing plants – Smilax excelsa, Periploca graeca, Clematis vitalba, Hedera helix, Tamus communis, Vitis vinifera subsp. sylvestris.
5	**G1.2232 (1)**	**Helleno-Balkanic ash-oak-alder forests (Humid lowland oak forests)**	Humid lowland forests dominated by English oak (Quercus robur) or pedunculate oak (Quercus pedunculiflora) with the participation of climbing plants though less than compared with the dense forests. Occurring mainly in the Danubian Plain and the region of Ludogorie.
6	**G1.2232 (2)**	**Helleno-Balkanic ash-oak-alder forests (Thracian forests of *Quercus pedunculiflora*)**	The Thracian forests of Quercus pedunculiflora and Q. robur are the driest subtype of lowland riparian forests. In most cases represent old forests of relatively small area surrounded by agricultural land. Climbing plants also occur, but much less than in dense forests. Occurring in the Tundzha Plain and the Upper Thracian Lowland.
7	**G1.3155**	**Rhodopide Mediterranean poplar galleries**	Riparian forests occurring in plains and lowlands at the conditions of transitional continental climate in South Bulgaria. They occupy narrow strips along the valleys

			of larger rivers (Maritsa, Tundzha, Struma, Mesta, Veleka, etc) and their feeders. Typical plant species: Populus nigra, Populus alba, Salix alba.
8	**G1.381**	**Helleno-Balcanic riparian plane forests**	Forests along rivers and their feeders in the southern part of the country, dominated by oriental plane (Platanus orientalis). Typical plant species: Platanus orientalis, Alnus glutinosa, Salix spp., Castanea sativa, Ostrya carpinifolia, Juglans regia.
9	**G1.413**	**Southern Helleno-Balkanic swamp alder woods**	Floodplain forests of black akder (Alnus glutinosa), occurring in the lower reaches of rivers in the Black Sea – Mediterranean Basin. At places they have a detached, strip-like distribution along rivers, thus obtaining the character of "galleries". In some sections the narrow-leafed ash (Fraxinus oxycarpa) is sub-edificator.
10	**G1.6921/ G1.6931**	**Southeastern Moesian and Balkan Range acidophilous beech forests**	Forests dominated by beech, developing on poor acidic and humid soils. Typical plant species: Fagus sylvatica, Luzula luzuloides, L. sylvatica, Calamagrostis arundinacea, Pteridium aquilinum,Vaccinium myrtillus, V. vitis-idaea, Poa nemoralis,
11	**G1.6922/ G1.6923/ G1.6932/ G1.6933**	**Southeastern Moesian and Balkan Range neutrophile beech forests**	Mesophytic forests dominated by beech, developing on neutral or close to neutral soils. They feature rich floristic composition of the herbaceous layer. Typical plant species: Fagus sylvatica, Galium odoratum, Anemone nemorosa, Lamiastrum galeobdolon, Sanicula europea.
12	**G1.661**	**Middle European dry-slope limestone beech forests**	Beech forests developing on limestone. Typical plant species: Fagus sylvatica, Berberis vulgaris, Ligustrum vulgare, and representatives of the family of Orchidaceae.
13	**G1.69**	**Thermophilous Moesian beech forests**	Pure and mixed deciduous forests with common beech (Fagus sylvatica subsp. sylvatica и Fagus sylvatica subsp. moesiaca) as the main ediphicator. Occurring mostly in the foothills, low mountains and lower parts of the high mountains in the range of 100 to 1000(1300) m alt. at the conditions of moderate-continental and transitional continental climate. Featuring thermophilous nature, emphasized by the presence of species from the neighbouring oak, lime, hornbeam, etc. deciduous forests. Typical plant species: Acer hyrcanum, Corylus colurna, Ostrya carpinifolia, Quercus cerris, Q. frainetto, Q. dalechampii, Sorbus torminalis, Tilia tomentosa, Carpinus betulus.
14	**G1.6E11**	**Eastern Balkan Range oriental beech forests**	Forests dominated by oriental beech (Fagus orientalis) in the Eastern Balkan Mountains. Characteristic of these forests is the lack of undergrowth of evergreen euxinic elements and less euxinial elements in the herbaceous layer. Typical plant species: Primula vulgaris ssp. sibthorpii, Trachystemon orientalis and Scilla bithynica.
15	**G1.6E12**	**Stranja oriental beech forests**	Forests dominated by oriental beech (Fagus orientalis) in Strandza. Typical plant species: Rhododendron ponticum, Daphne pontica, Ilex colchica, Laurocerasus officinalis, Vaccinium arctostaphylos, Cyclamen coum, Primula vulgaris ssp. sibthorpii, Salvia forskaohlei, Symphytum tauricum, Trachystemon orientalis.
16	**G1.737**	**Eastern sub-Mediterranean white oak woods**	Forests of pubescent oak (Quercus pubescens) – pure or mixed with other thermophilous species.
17	**G1.76A41**	**Stranja** [*Primula rosea*]-**[Quercus polycarpa] forests**	Pure or mixed forests of oriental durmast (Quercus polycarpa) in Strandzha and the Eastern Balkan Mountains.
18	**G1.7A1**	**Euro-Siberian steppe [*Quercus*] woods**	Forests dominated by Turkey oak (Quercus cerris) or pedunculate oak (Quercus pedunculiflora) on loess in

			the Danubian Plain, Ludogorie, and the Dobrudzha Plateau.
19	**G1.7C1**	**[*Ostrya carpinifolia*] woods**	Communities dominated by or with considerable participation of hop-hornbeam (Ostrya carpinifolia)
20	**G1.7C34**	**Moesian thermophilous maple woods**	Forests with participation of or dominated by Montpellier Maple (Acer monspessulanum). Typical plant species: Acer monspessulanum, Fraxinus ornus, Quercus pubescens, Syringa vulgaris, Prunus mahaleb
21	**G1.7C41**	**Silver lime woods**	Forests dominated by silver lime (Tilia tomentosa)
22	**G1.7D1**	**Helleno-Balkanic chestnut forests**	Pure and mixed natural stands and old plantations dominated by or with considerable participation of sweet chestnut (Castanea sativa).
23	**G1.7(E)**	***Cercis siliquastrum* forests**	Forests and thickets with participation of Judas tree (Cercis silisquastrum).
24	**G1.7642**	**Rila *Quercus protoroburoides* forests**	Communities dominated by Rila oak (Quercus protoroburoides).
25	**G1.9135**	**Illyro-Moesian montane birch woods**	Natural pure and mixed forests of Betula pendula with the participation of Fagus sylvatica, Picea abies, Pinus sylvestris, Abies alba, Pinus peuce and Populus tremula.
26	**G1.A4**	**Ravine and slope woodland**	Mixed deciduous forests on steep and precipitous sites. Typical plant species: Fraxinus excelsior, Acer pseudoplatanus, Tilia cordata, Tilia platyphyllos.
27	**G1.A462 21**	**Balkan Range horse-chestnut ravine forests**	Forests dominated by horse chestnut (Aesculus hippocastanum)
28	**G1.A711**	**Western Euxinian mixed forests**	Mixed deciduous forests with the participation of tanniniferous oak (Quercus hartwissiana)
29	**G3.16**	**Moesian [*Abies alba*] forests**	Monodominant or mixed forests of silver fir (Abies alba).
30	**G3.171**	**King Boris´s fir forests**	Mixed forests of common beech (Fagus sylvatica) and Bulgarian fir (Abies borisii-regis).
31	**G3.1E1**	**Southeastern Moesian [*Picea abies*] forests**	Monodominant and dominated by spruce forests in Vitosha, Rila, Pirin and Rhodope Mountains.
32	**G3.E32**	**Moesian Scots pine mire woods**	Forests of Pinus silvestris and Picea abies distributed on mires in the Western Rhodopes, Vitosha and Rila.
33	**G3.1E4**	**Balkan Range [Picea abies] forests**	Monodominant and dominated by spruce forests in the Western and Central Balkan Mountains.
34	**G3.4C**	**Southeastern European [*Pinus sylvestris*] forests (on limestone)**	Scots pine forests developing on limestone with fragmentary distribution in Pirin, Central Rhodopes and Slavyanka in the range of 1100–1400 m alt. Most often being monoedificator or mixed with participation of black pine.
35	**G3.561(1)**	**Helleno-Balkanic Pallas' pine forests**	Forests of black pine with relict nature. Typical plant species: black pine (Pinus nigra ssp. pallasiana).
36	**G3.561(2)**	**Mixed *Pinus nigra – Picea abies* fortests**	Natural mixed forests of Pinus nigra and Picea abies.
37	**G3.616**	**Rhodopide white-barked pine forests**	Natural xero-mesophytic monodominant and mixed forests of Pinus heldreichii with participation of Pinus mugo, Pinus nigra, Pinus sylvestris, Pinus peuce, Picea abies and Abies alba.
38	**G3.62**	**[*Pinus peuce*] woods**	Natural monodominant and mixed forests of Pinus peuce with participation of Pinus mugo, Pinus sylvestris, Pinus heldreichii, Picea abies and Abies alba.
39	**G3.932**	**Peri-Rhodopide Grecian juniper woods**	Sparse forests dominated by Grecian juniper (Juniperus excelsa).
40	**G4.6**	**Mixed [Abies] - [Picea] - [Fagus] woodland**	Mixed conifer-deciduous forests of common beech (Fagus sylvatica) and silver fir (Abies alba) and/or Norway spruce (Picea abies).
41	**G4.8(1)**	**Mixed [*Pinus peuce*] [*Fagus*] forests**	Natural mixed conifer-deciduous forests of Pinus peuce, Fagus sylvatica, Picea abies and Pinus sylvestris
42	**G4.8(2)**	**Mixed [*Pinus heldreichii*] [*Fagus*]forests**	Natural mixed conifer-deciduous forests of Pinus heldreichii and Fagus sylvatica.

43	**G4.8(3)**	**Mixed non-riverine deciduous and coniferous woodland**	Forests with the participation of black pine (Pinus nigra) and hop-hornbeam (Ostrya carpinifolia)

* For more information refer to: http://eunis.eea.europa.eu/habitats-code-browser.jsp; Biserkov, V., Gussev, Ch., Popov, V., Hibaum, G., Roussakova, V., Pandurski, I., Uzunov, Y., Dimitrov, M., Tzonev, R., Tzoneva, S. (ed.) 2011. Red Data Book of the Republic of Bulgaria, Volume 3. Natural Habitats". IBER – BAS& MoEW, Sofia

Annex 4A – Management characteristics and recommended forest management activities for ecosystems in Annex 4(Priority natural forest habitats with national and European importance)

Some of the forest habitats in Annex 4 have similar characteristics, which make possible to unify them in groups specified below with their particularities and guidance for management.

1. **Natural riparian forests dominated by willows, poplars and alders.**

These are communities with rich biodiversity, which often sustain unique flora and fauna species. They are with critical importance for protection and erosion control, and also aesthetic value. They are under negative anthropogenic impact during last decades. In order to save these forests it is recommended to stop any management activities in their land. If decision for management of these forests is taken than the forestry management activities have to be directed to each tree and biogroup. Clear cuttings and gradual regeneration cuttings shall not proceed. The trees and biogroups along the rivers have not to be logging object. Protection of key biodiversity elements have to be provided – deadwood, trees with hollows and etc.

Inventory in regions occupied by these kinds of habitats has to be made and management plans have to be developed. Recovering, where it is possible, normal water supply regimes, which will prevent the spread of exotic species (amorphata, American ashl-tree). The destruction of riparian willow belts along the rivers have to be stopped and have to search ways for keep balance between areas occupied with intensive poplar plantations and natural riparian ecosystems, dominated by willows, poplars and alders and etc. Support natural regeneration of native species (willows, poplars and alders). Actions for improvement of forest security and prevention of logging in alder trees have to be undertaken. Make restrictions for reduction of areas occupied by this type of habitats for infrastructure or other project purpose, increase of arable land and etc.

2. **Natural beech forest**

Diversity of forestry systems has to be implemented in order to provide biological diversity in this basic forest group. The share of selected cuttings (group selected cutting) and cuttings with long recovery period have to be increased. They will help in development of irregular spatial structure, which will provide richer habitat diversity. Likewise they will help in protection of dendrology diversity. Cultivation activities have to be made on time in order to improve sustainability of young plantations. Different growing phases of beech communities have to be presented during the planning process and forestry activities Special attention has to be taken to protection of the plantations, in “old growth forests” stage. Protection of key biodiversity elements has to be provided – islands of old age, trees with hollows, leisure zones and etc. Priority in offspring beech forests management has to be their transformation into seed forests. Protection functions of beech stands with low timber effect have to be taken into account. Management activities implemented in endemic communities of Fagus orientalis in Strandga have to be restricted. For recovery activities through afforestation only native origins and species have to be used. Activities for improvement of forest protection have to be taken. Prohibition of decreases areas for infrastructure and other projects purposes.

3. **Natural forests dominated or sub-dominated by different oak species**

Clear cuttings have are not permitted in this communities and pasture of domestic cattle have to be restricted in these areas. Loggings with long recovery period have to be increased in order to develop irregular spatial structure and varied species composition. Cultivation activities have to be made on time in order to improve sustainability of young plantations. Different growing phases of oak communities have to be presented during the planning process and forestry activities Priority is given to protect plain oak forests, which are natural islands of biodiversity in plains (Chirpanska and Aitovska koriaand etc.). Protection of key biodiversity elements has to be provided – islands of old age, trees with hollows, leisure zones and etc. Priority in offspring oak forests management has to be their transformation into seed forests. Discontinue the reconstruction of low productive habitats and give priority to natural vegetation and succession processes. These types of forests are vulnerable to anthropogenic influence and therefore they don’t have to be used for timber production. Priority has to be given to natural recovery and during afforestation only native species and origins have to be used. Activities for

improvement of forest protection have to be taken. It is not recommended decreasing of areas for purposes of infrastructure and other project, increasing the arable lands and etc.

4. Natural pure and mixed natural plantations of Betula pendula with the participation of beech

This community consists of two tree species with contrast ecological characteristics, which point the question about its sustainability in time. Its current state is due to anthropological influence, express in cuttings, grazing and burning down the native species. Its long-term existence is possible in the diverse micro – habitats territory with different characteristics. For example slopes with combination of comparatively humid areas and deeper soils (gullies) and parts with humidity deficit and infertile, rocky soil.

The long-term dynamics of species composition will depend on the combination of habitat micro-conditions. The participation of birch, which is pioneer species, will decrease and will be saved only in places where it has competitive priority – very rocky soils and humidity deficit.

Beside its crucial anti erosion importance, the birch can be taken as a "source" for birch spreading into adjacent non-forested areas. Its aesthetic value also has to be taken into account.

The forestry activities have to keep the mixed plantations but not to interrupt their natural dynamic, i.e. not to keep the birch in places where it has no competitive priority.

5.Tilia tomentosa natural forests

In plantations in good condition have to extend cuttings and to implement appropriate cultivation activities. Strict control has to be taken during the gathering of blossoms for economic purpose and prevention of cutting branches and whole trees for this purpose.

6.Forests with Abies alba and Abies borisii-regis

Fir-tree is appropriate species for implementation of selection management and cuttings with long recovery period. Implementation of gradual cutting has to be restricted with exception where purpose is habitat richness. Cultivation activities have to be made on time in order to improve sustainability of young plantations. Different growing phases of fir-tree communities have to be presented during the planning process and forestry activities Special attention has to be taken to protection of the plantations "old growth forests" stage. Protection of key biodiversity elements has to be provided – islands of old age, trees with hollows, leisure zones and etc.

The forests with *Abies borisii-regis* have to be included as part of protected areas, because of their endemic character. Development of management plans for protected areas and implementation of forestry activities complying with biology and ecology of the species.

7.Coniferous forests on the upper timberline with conversion to pine-scrub communities

These forests have only protective importance and therefore implementation of forestry activities is not recommended. When in some cases forestry activities are needed, they have to imitate natural dynamics and recovery processes for this kind of species.

8. Monodominates and forests with domination of spruce in Vitosha, Rila, Pirin and Rodops

Spruce forests are appropriate species for implementation of selection management and cuttings with long recovery period. Implementation of gradual cutting has to be restricted with exception when the purpose is achievement of habitat richness. Cultivation activities have to be made on time in order to improve sustainability of young plantations. Different growing phases of spruce communities have to be presented during the planning process and forestry activities Special attention has to be taken to protection of the plantations in "old growth forests" stage. Protection of key biodiversity elements has to be provided – islands of old age, trees with hollows, leisure zones and etc.

Activities for recovery of habitats in areas not occupied by forests or in regions where no afforestation is carried out but are suitable for forests have to be undertaken.

9. Pinus nigra natural forests

Different forestry systems have to be applied, not only gradual cutting, like the usual practice. The usage of rocky Pinus nigra forests has to be prohibited.

Different growing phases of Pinus nigra communities have to be presented during the planning process and forestry activities. Anti-fire measures have to be developed. Protection of key biodiversity elements

has to be provided – islands of old age, trees with hollows, leisure zones and etc. Development of protected areas management plans , which include forests with natural Pinus nigra communities.

10. Mixed spruce and Pinus nigra forests

Implementation of forestry activities has to be done in order to protect mixed pattern of the plantations. Group-selected and irregular gradual cutting with bigger sizes are recommended, which will provide recovering of Pinus nigra. Cutting rotation period in these forests has to be increased.

11. Pinus heldreichii forests

Main loggings are prohibited.
The reduction of areas for infrastructure or other project purposes is prohibited.

12. Pinus peuce forests

Different forestry systems have to be implemented in forestry management of Pinus peuce forests in order to provide diverse habitats. Cultivation activities have to be made on time in order to improve sustainability of young plantations. Different growing phases of Pinus peuce communities have to be presented during the planning process and forestry activities. Protection of key biodiversity elements has to be provided – islands of old age, trees with hollows, leisure zones and etc. Habitats management plan included in protected areas has to be developed. Activities for recovery of habitats in areas not occupied by forests or in regions where no afforestation is carried out but are suitable for forests have to be undertaken.
Anti-fire measures have to be developed. The reduction of areas for infrastructure or other project purposes is prohibited.

13. Coniferous forests on peat bogs

Spruce and Pinus silvestris natural forests situated in high mountains, over peat bogs. They have restricted areas (around 200ha) in Vitosha and Rodopes mountains. Inventory of the regions occupied by these kinds of habitats has to be made. Any kind of loggings has to be prohibited. Increasing the habitats area, parts of protected territory. Habitat management plan has to be developed.

14. Mixed deciduous-coniferous forests

Implementation of forestry activities has to be done in order to protect mixed pattern of the plantations. Cultivation activities have to be made on time in order to improve sustainability of young plantations. Different growing phases of the plantations and different tree species have to be presented during the planning process and forestry activities. Special attention has to be taken to protection of the plantations in “old growth forests” stage. Protection of key biodiversity elements has to be provided – islands of old age, trees with hollows, leisure zones and etc.

15. Old growth forests

Old growth forests (OGF) with their specific structure and functionality are habitat for complex of species from different ecological and taxonomy groups. Due to lack of knowledge about OGF it is difficult to define how much of the surveyed species are connected only to these forests but definitely can be concluded that many of the species found in OGF optimal living conditions. Even more during the comparison between OGF and younger forests essential differences in the biodiversity are found which is an indicator for the unique of these systems.

At least 2% from the territory of the FMU have to be separated to provide old growth forests. Particularly suitable for this purpose are 100 years old natural forests, which were not under anthropogenic influence. In this forest group can be included forest plantations when necessary. It is recommended that the OGF have relatively an even distribution over the territory, as the area of one old growth forests complex is no less than 40 ha. The connectivity of these complexes with OGF corridors has to be provided.
The natural dynamic of the defined plantations has to be kept in order to reach the characteristics of the OGF. The forestry activities and loggings in their territories are not permitted except during huge natural damages (wind throw and calamities occupying over 50% of the OGF area). Other exceptions of the rule are the forest plantations. They require forestry activities to provide their sustainability and the process of structural differentiation.

Approximately 160 to 230 years are needed for forest with characteristics of OGF to be formed. The transformation from mature forests to OGF is gradual and its duration depends on forest composition (the species reach mature for different periods of time), habitat conditions (the period is shorter in good habitat conditions compared to bad conditions) and primary structure of the plantations (in homogeneous structure is slower than the heterogeneous).

ANNEX 5 – METHODOLOGY FOR IDENTIFICATION OF HVF 5. PRELIMINARY ASSESSMENT

This HCV differ from biological and environmental values in participation of local communities into the forest management. The preliminary assessment identifies communities that are potentially dependent on forest resources.
In Bulgaria the following resources characterize HCV 5 according to the level of community dependency on them, existence of easily accessible replacements and interaction with other HCVs:

- Firewood and wood for other daily needs
- Pasture
- Fodder – hay and leaf mass
- Mushrooms
- Other non-timber resources – medicinal plants, forest fruits, snails, products from hunting (trade non-timber forest products, like caught animals, resins, fruits, etc.)
- Water supply (drinking and other daily needs water (see HCV 4.1).

Some of these uses might contravene local laws (for example when people extract timber or use other resources without an official/legal permission) or contradict other HCVs (for example when people hunt or use in another way protected species). During the identification/ preliminary assessment, the assessor must identify by the inclusion method all the potential usages of forest resources, without prejudice of the legality and sustainability of these uses of the forest by the people.

In Bulgaria HCVs can be all LFFF, which are parts of settlements or settlement formations in undeveloped rural areas (defined under Regulation 105/02.06.1999 of MRDPW), the settlements have no electricity neither developed road infrastructure (difficult of access, no asphalt roads). The LFFF are up to 5 km away from the settlement borders, and are identified by verification of critical importance through inquiry with local people.

The forest managers/users have to identify whether the community for which existence the forest is with crucial importance is falling into the undeveloped areas list – *Annex 5A.*
Managers have to verify the list periodically for updates.

Sources of information/data:
- the Ministry of Regional Development and Public Works Departments;
- Agriculture and Forests Directorates at the District authorities.

Annex 5A – List with Undeveloped Rural Areas in Bulgaria, defined under Regulation 105/02.06.1999 of MRDPW

1. Straldga (district with administrative center Yambol)
2. Kotel (district with administrative center Sliven)
3. Dolni chiflik, Dalgopol(district with administrative center Varna)
4. Suvorovo(district with administrative center Varna)
5. Varbitza, Smiadovo(district with administrative center Shumen)
6. Antonovo, Omurtag(district with administrative center Targovishte)
7. Tervel (district with administrative center Dobritch), Alfatar and Kainardga(district with administrative center Silistra)
8. Kaolinovo, Venetz, Nokola Kozlevo, Hitrino (district with administrative center Shumen)
9. Tutrakan, Glavinitza, Sitovo(district with administrative center Silistra), Zavet, Kubrat(district with administrative center Razgrad) and Slivo poljie(district with administrative center Rousse)
10. Loznitza, Samuil (district with administrative center Razgrad)
11. Dve mogili, Borovo, Tzenovo(district with administrative center Rousse), Opaka(district with administrative center Targovishte) and Tzar Kaloian(district with administrative center Razgrad)
12. Zlataritza, Stragitza(district with administrative center Veliko Tarnovo)
13. Guliantzi(district with administrative center Pleven)
14. Ugarchin(district with administrative center Lovech)
15. Knega, Oriahovo(district with administrative center Vratza) and Iskar(district with administrative center Pleven)
16. Biala Slatina, Mizia, Hairedin, Borovan, Krivodol(district with administrative center Vratza)
17. Lom, Boichinovtzi, Brusartzi, Valchedram, Medkovetz, Iakimovo(district with administrative center Montana)
18. Varshetz(district with administrative center Montana)
19. Belogradchik, Boinitza, Bregovo, Gramada, Dimovo, Kula, Novo selo, Rougintzi(district with administrative center Vidin)
20. Tran(district with administrative center Pernik) and Trekliano(district with administrative center Kiustendil)
21. Nevestino(district with administrative center Kiustendil)
22. Stroumiani(district with administrative center Blagoevgrad)
23. Belitza, Iakorouda (district with administrative center Blagoevgrad)
24. Garmen(district with administrative center Blagoevgrad)
25. Devin, Borino(district with administrative center Smolian)
26. Velingrad, Rakitovo(district with administrative center Pazardgik)
27. Strelcha(district with administrative center Pazardgik)
28. Rakovski, Sadovo(district with administrative center Plovdiv) and Bratia Daskalovi(district with administrative center Stara Zagora)
29. Pavel Bania(district with administrative center Stara Zagora)
30. Mineralni bani(district with administrative center Haskovo)
31. Ardino(district with administrative center Kardgali)
32. Kirkovo(district with administrative center Kardgali)
33. Stambolovo(district with administrative center Haskovo)
34. Topolovgrad(district with administrative center Haskovo)

ANNEX 6 – METHODOLOGY FOR IDENTIFICATION OF HCV5 – FULL ASSESSMENT. MANAGEMENT AND MONITORING OF HCV5 FORESTS.

The full assessment of this HCV always requires consultation. After conclusion that the community uses the forest for some basic needs, the Full Assessment identify whether a forest is with crucial importance to them. Therefore different methods are used depend on the socio-economic context and the specific need. Sometimes the forest manager will need guidance from social scientists that specialize in the region. However consultations with the community itself are always helpful, like described in the Appendix.

STEP 1: IDENTIFICATION OF ISOLATION AND DEVELOPMENT OF INFRASTRUCTURE OF LOCAL COMMUNITY

If local community included in the list of Undeveloped Rural Areas – *Annex5A*, then have to verify whether the settlement has electricity, the level of road infrastructure development, and the level of isolation. If the settlement meets the requirements of HCV 5, then goes on to next step.

STEP 2: IDENTIFYING SUB-GROUPS IN EACH VILLAGE BASED ON THEIR LIVELIHOOD PATTERN

Villages in Bulgaria usually consist of sub-groups with different ethnic origins and livelihood patterns. Before the identification of each value importance starts, the interviewers have to divide villages in sub-groups according to their livelihood pattern, like in the following table. This information can usually be obtained from the village leaders or other key informants.

Table 1 – Identification of sub-groups within one village community

№	Ethnic group/origin	Main sources of livelihood	Other key characteristics (i.e. date of arrival, location of dwelling, etc.)	Approximate number of households	% of village population

Each group, which represents at least 15% of the village population, should be considered as a significant sub-group and should be interviewed separately – either through individual interviews or through group interviews in which only one sub-group is represented.

STEP 3: IDENTIFY HOW EACH SUB-GROUP MEETS ITS BASIC NEEDS

The following table is proposed for each sub-group, as a guide for individual or group interviews. The purpose of this table is to identify how different types of resources, including forest resources as well as alternative resources such as agriculture, fishing, crafts, market, or government assistance, forest company development programmes or NGOs, meet each of the sub-group basic needs.

The table was tested in several communities in other countries, with different level of forest dependency, and it appeared to be easily understood, enabling a good and active people participation and a good group interaction. A small group of participants (5 to 15) needs about one hour to fill the table. However the people who make the interviews can change the model according to their knowledge, experience and local conditions.

The table can be used for individual interviews but this can make the procedure take longer time. It is more efficient in terms of time to use the table with small groups of people on a group consultation meeting. The perfect number of people is from 5 to 15. This can be used for different

small groups representing different sub-communities depending on ethnic group, livelihood pattern, age and gender.

Regarding the gender, it is important to provide women participation, since they usually have a different share in resource usage. Women are usually involved more in the gathering of particular forest products, such as medicinal plants and forest fruits, and probably have a different opinion about their importance. In other countries mixed gender group discussions tend to be dominated by men. In order to get an appropriate representation of women's point of view, separate group discussions with women can be organized.

Table 2 - Satisfaction of Basic Needs

Village:……. Sub-Group (based on table 1):…….							
Needs	Sources						
	Forest or land from the forest fund		Agriculture (cultivation), stock-breeding	Purchase/ Trade	Aid	Others (e.g. fishing – amateur and sports fishing should be differentiated)	Explanations, notes
	FMU	Other					
Wood: - Firewood							
- For other everyday needs							
- For materials (construction, farming, tools)							
Food for animal: - Pasture							
- Fodder (hay, leaf mass)							
Non-timber products: - Mushrooms							
- Medicinal plants							
- Fruits							
- Resins							
- Snails, other uses of animals, hunting							
Drinking and other daily needs water							
Cash income							
Others							

Instructions for filling the table

The table can be reproduced on a large piece of paper and put on the wall of the house or other building where the consultation is taking place. The facilitator then explains the purpose of the consultation and proceeds to ask villagers where from they derive each of the main resources in the table below, and the respective importance of each resource.

For example, the facilitator might ask the community about their main fuel, e.g. firewood; the main source of this fuel and how they obtain it. Villagers will usually list the most important source first, and then other sources. For each source the facilitator asks the villagers whether they derive all their wood from this source (ranking: 4); most of their needs are satisfied from it (ranking: 3), a significant part of their needs (2), only a tiny, marginal part of their needs (ranking: 1), or none at all (0).

Then in each cell, the facilitator indicates ranking from 1 to 4 as explained below, and lists the corresponding resources, e.g. "dry fallen mass", "blueberries", "struts", "stakes for agriculture", etc. The importance of each source for each need is determined with the following levels:

4 - Essential = 100% of a given need is satisfied by one source (for example, if all the water used by the community comes from the forest's rivers, put "4 (all)" in the "forest" column in the "water" row).

3 – Critical = more than 50% of a given need is satisfied by one source.

2 - Important = between 15% and 50%.

1 - not important = less than 15%.

0 – non-existent = 0%.

Not all the cells have to be filled, but at least all the ones with a value above 2 should be filled. Likewise, all cells in the column "forest" should be filled to make sure that the importance of the forest is carefully evaluated. Depending on the circumstances, the column "forest" can be split in two or not. If the interviewed group lives in the middle of the Forest Management Unit under evaluation, then everything they derive from the forest is likely to be from the FMU (in case it is large enough). If the community is near the border of the FMU or often moves beyond its borders, then it might be necessary to clarify what percentage of their resources they draw from the FMU and what is the percentage derived from another forest.

It is important to realize that it is not necessary to ask communities to fix these percentages. If they are ready to give such percentages, they can be used to classify the importance of each resource in the categories from 1 to 4 above. However, it should be remembered that communities are not used to keeping quantified records of their needs and resource uses, so percentages given during interviews can be very misleading. Rather than trying to obtain figures, which would require months of data collecting, it is recommended to base the identification of fundamental resources on the qualitative perception of the people, which will be a more adequate indicator.

The levels from 1 to 4 can easily be obtained during individual or group discussions. In ordinary language, farmers to qualify the importance of a source satisfying a particular need could use the following expressions:

For example, the following questions can be asked for qualitative identification of each level:

"Do you get all your fruits from the forest or there are other sources?" → if the answer is "all" then the level is 4 for the forest in the line "fruits".

If there are other sources, for example a garden, then the following question can be asked:
"Do you get more fruits from the forest or from the garden?" → if the answer is "more from the forest", then the level is 3.

If the answer is "more from the garden" then the following question can be asked:
"Do you get a significant portion of fruits from the forest or just very little, seldom, and not in an important way?". If the answer is "significant, rather important", then the answer is 2, if the answer is "marginal, occasional, or not important", then the answer is 1.

Some resources may become critical only at certain times of the year, or during crop failures, as a replacement. For example, mushrooms collected from the forest could not be a main resource in times of drought. If the community qualifies a certain forest resource as marginal, always check that this is the case all year long and all the time, for example by asking "are there certain times when it becomes more important?" If the answer is yes, then the importance of the resource should be moved to 2 (significant) and if there is no replacement during that period, it is an HCV.

If no fruits at all are derived from the forest, then obviously the level is 0.

For each need for which the forest is considered as "not important" or "non existent" (value 0 or 1) in satisfying it, the forest is not fundamental and will not be qualified as a HCV.

STEP 4. IDENTIFYING FUNDAMENTAL FOREST FUNCTIONS

For each need for which the forest has been ranked between 2 and 4 as a source (important, critical or essential), the consultation has to be more thorough. The table below should be filled, which will establish the readiness of alternatives and whether they are within the reach of the people.

Changes are important to consider. If a given resource from the forest is being less and less used and more and more replaced by alternative uses, this may disqualify a resource as fundamental. This is especially true when people are investing in alternative sources, for example if they are developing cash crop plantations that will make them less dependant on NTFP for cash needs. This criterion is especially important for 'ambiguous' cases, when it is difficult to decide whether the resource is fundamental or not.

Questions in the table below will help to find out whether the resource is fundamental or not. It indicates whether the community has access to satisfying replacements of the forest resources or not. Each resource that has no accessible and satisfying replacement is a HCV.

Again this table is proposed as a guide; local groups or researchers may develop their own models to suit their needs.

Table 3 - Identifying fundamental forest resources

Village: ***XXX***……	**Sub-Group:** (based on table 1) ***2***
Forest resource (e.g. firewood, wood for construction, hay), based on table 2	**Ranking of the forest's importance in meeting this need (2 to 4), based on table 2**
If the need cannot be met by the corresponding forest resource, are there available alternatives?	Make list of the alternatives. If there are none, the resource may be a HCV. If there are some, continue with the rest of the table.
Are these alternatives available: - All year long every year, - In sufficient quantities to replace the forest resources, - And in an accessible location by available means of transportation.	If the answer is "no" to one of these questions: there may be a HCV. If the answer is yes to all questions: continue below.
If yes, can they be obtained for free or would there be a cost involved (for example, cash needed to buy and transport a replacement, labour and land needed to start new agricultural activities)?	If the replacement is available for free (for example, free medicines at the village dispensary), this is not a HCV. If there is a cost, continue below.
If there is a cost, is it within the reach of all the people (for example do they have enough cash to buy it, or do they have	If no: Fundamental/HCV; If yes: not fundamental.

enough labour and land to start a new agricultural production as replacement?)	
Is there a trend of change in people's dependency on this resource? For example, are they less and less using the rivers for water, or is the collection of NTFPs declining? If there is a trend of change, are people investing in substitutes (e.g. cash crops, animal husbandry, etc.)? Are they actively trying to protect the existing resources? Are all the community members concerned about these trends or just a minority?	In case of hesitation about the importance of a resource, the obvious declining trends in the use of the forest, affecting the community as a whole, may disqualify the forest from being fundamental, especially if people are actively investing in new, alternative sources such as agriculture. On the contrary, if the community is actively protecting the forest resources, then it is a HCVF.

IMPORTANT: if the forest is fundamental for meeting even only one of the basic needs mentioned in table 2, this is sufficient to qualify the corresponding resource as a HCV.

STEP 5. IDENTIFYING SUSTAINABLE FOREST USES COMPATIBLE WITH OTHER HCVS

As mentioned above, HCVs do not cover excessive uses of forest resources beyond sustainable levels, or uses that are not compatible with the maintenance of other HCVs. Such uses of forests by communities, once identified, have to comply with the other principles of HCVF management. However, it is important to remember that the focus here is the lifestyle of local communities. If the local communities themselves make a forest use unsustainable, then this use is not a HCV – unless communities have firmly decided to reverse this trend. If the communities use the resource in a sustainable way, but external parties endanger the resource, then the use of the forest by the local community is still a HCV that needs to be protected from external threats.

Table 4 - Identifying sustainable forest uses compatible with other HCVs

Village: ***XXX***……..	**Sub-Group:** (based on table 1) ***2***
Forest resource (for example firewood, wood for construction, drinking water, etc.), based on table 2	**Importance of the forest for meeting the need (from 2 to 4), based on table 2**

For how long has the community used the resource?	Recent uses of the forest compelled by market development and not bound by traditional regulations may not be sustainable. Uses that have existed for at least a generation might be sustainable, unless there have been changes in availability and extraction levels (see next questions).
Are these resources used in a sustainable manner, i.e. do the villagers think that they can continue to sustain present use/harvest level indefinitely?	If the answer is yes, and unless there are indications of the contrary from other questions, then the resource use is probably sustainable. Always use the questions below to confirm.
Has there been a declining trend in the availability of this resource during the last 5/10 years? (for example, mushrooms getting more rare, timber sources farther from the village…)? Is this change due to external parties, or to the activities of the community itself (for example increased levels of extraction, conversion of the forest…)? For how long do they think they can sustain present levels before the resource is exhausted?	If the resource availability is significantly declining because of the communities' own activities, and/or if they forecast its exhaustion, this may not be a HCV, unless communities express their will to change the trend.
Does the use of the resource by the community threaten other HCVs (endangered species for example)?	Besides consultation with communities, this will require discussions with an ecologist.
Does the community hope, plan or want to reverse this trend? Are there some rules that are followed by the community to regulate the use of this resource? Are the villagers ready to introduce such rules, and/or enforce old/existing ones?	If the resource is declining or threatening other HCVs, but the communities are ready to do something to counter this trend, then this may still qualify as a HCV.

These questions should not always be asked straightforward, the best is to engage people in an informal discussion. The first indicator of resource exhaustion is not usually the fact that higher levels of inputs are needed to sustain the same level of output. For example, villagers may have to walk longer distances to find the fruits they need. Another indicator is the reduced quality of the harvested resource, for example people logging trees in areas of smaller and smaller size.

GUIDANCE FOR MANAGEMENT OF HCV 5

1. Identification of threats and sources of threats for identified HCVs. and evaluation of the potential harmful effects of forest operations over these resources.
2. Identification of possible conflicts between ecological and social aspects of HCVFs.
3. Work with communities to identify specific territories with this HCV which management have to be coordinated with particular FMU.
4. When this HCV is identified, the forestry plans and projects activities and strategies for municipalities development have to be revised according to HCV protection.

GUIDANCE FOR MONITORING OF HCV 5

1. Determine the current status and trends in the status of HCV5
2. Use the results from the monitoring to revise and adjust the forestry plans and projects activities and strategies for municipalities' development.

Annex 7 – List of forest areas critical to the conservation of cultural values and traditions, religious and ethnical identities

Holy places for Christians and Muslims in Bulgaria, situated in/or adjacent to forests

Orthodox monasteries

Stavropigialni

1. Bachkovski "Uspenie Bogorodichno"(with aiazmo[2] and chapels[3] outside the monastery)
2. Rilski"St.Ivan Rilski" "(with aiazmo[4] and ….. outside the monastery)
3. Troianksi "Uspenie Bogorodichno"

Vidinska eparchy:

4. Albutinski monastery cut in the rock – village Rabovo (XIII cntury)
5. Brusarski "St.Arhangel Mihail"
6. Dobridolski"Sv. Troitza"(aiazmo)
7. Izvorski"Uspenie Bogorodichno" (aiazmo)
8. Klisurski monastery "St.Kiril and Metodi"
9. Chiprovski"St. Ivan Rilski"
10. Rakovishki"Sv Troitza"
11. Lopushanski"St. Joan Predtecha"

Vrachanska eparchy:

12. Dolnobeshovishki "St.Arhangel Michail"
13. Matnishki"St. Nikolai"
14. Cherepishki "Uspenie Bogorodichno"
15. Strupezki"St.Pr.Ilia"
16. Bistretzki"St.Ivan Rilski"(Kasinez)

Lovchanska eparchy:

17. Botevgradski"Rojdestvo Bogorodichno"
18. Vracheshki"St.George Pobedonosetz"
19. Glogenski"St.George"
20. Etropolski"Sv Troitza"
21. Praveshki"St.Teodor Tiron"
22. Tetevenski"St.Pr.Ilia"
23. Karlukovski"Sv Bogoroditza"
24. Chekotinksi"St Archangel Michail"
25. Zlatishki"St.Vzanesenie Gospodne"
26. Novoseski"Sv Bogoroditza"
27. Skravenski"Sv Preobragenie"

Velikotarnovska eparchy:

28. Batoshevski"Sv Bogoroditza"
29. Sokolovski"Uspenie Bogorodichno"
30. Drianovski"St.Ah. Michail"
31. Kilifarevski"Sv.Bogoroditza"
32. Preobragenski"Preobragenie Gospodne"
33. Patriarsheski"Sv. Troiza"
34. Liaskovski"St Petar&Pavel"

Dorostolo-Chervenska eparchy:

[2] *aiazmo* (gr..) - holy (healing) spring. One or a few trees and shrubs near aiazmo are honored as places for "leaving the pain".

[3] One or group of trees near the *chapels* is honored as places for blood sacrifice during the patron saint's day or private occasion for sacrifice. These trees are holy and area around is sanctity.

35. Ivanovski churches and monasteries cut in the rock (natural reserve, cultural site with global importance, protected by UNESCO)
36. Karan Varbovka villages -“Sv Petka” (with aiazmo in the yard)

Varnensko-Preslavska eparchy:

37. Aladga monastery
38. Preslavski monastery “St Kirli&Metody”

Plovdivska eparchy:

39. Batkunski “St Peter&Pavel”(village Patalenitza)
40. Gorno vodeski “St Kirik&Iulita”
41. Muldavski “St Petka Muldavska”
42. Monastery in ”Sv Troitza” on Krastova gora
43. Sopotski “Sv Bogoroditza”

Starozagorska eparchy:

44. Magligki”St Nikolai Mirikliiski”
45. Chirpanski”St Atanasii Veliki”

Sofiiska eparchy:

46. Alinski “St Spas”
47. Batulia “St Nikola”
48. Bistrishki “St Petka”
49. Bilinksi “St Archangel Michail”
50. Boboshevski “St Dimitar”
51. Bukurovski “St George Pobedonosetz”
52. Mislovishki (Velinovski) “Sv Bogoroditza”
53. Germanski “St Ivan Rilski”
54. Giginski ”St Kozma&Damian”
55. Goleshki “St Nikolai Letni”
56. Gornovasilishki “Sv Vaznesenie”
57. Dragalevski “Sv Bogoroditza”
58. Divotinski “Sv Troitza”
59. Dolnolozenski “St Spas”
60. Dolnopasarelski ”St Peter&Pavel”
61. Eleshnishki “Sv Bogoroditza”
62. Zemenski “St Ioan Bogoslov”
63. Gablianski “St Ioan Predtecha”
64. Iskrezki “Sv Bogoroditza”
65. Kokalianski “St Archangel Michail”
66. Kremikovski “St George”
67. Kurilovski “St Ivan Rilski”
68. Leva reka “Sv 40 machenizi”
69. Odranitza ”St Petar&Pavel”
70. Osenovlashki “Sv Bogoroditza”(Sedemte prestola)
71. Peshterski “St Nikola”
72. Razboishki “Sv Bogoroditza”
73. Radiboshki “Sv Troitza”
74. Seslavski “St Nikolai”
75. Transki “St Arch Michail”
76. Shumski “St Arch Michail”

Nevokopska eparchy

77. Gornobreznishki “St Prorok Ilia”
78. Gozedelchevski ”Givopriemnii iztochnik” (with aiazmo)
79. Rogenski “Rogdestvo Bogorodichno”
80. Troskovski “St Archangel Michail”

81. Hadgidimovski “St George Pobedonosetz”

MUSLIMS MONUMENTS

1. Hamlet Teketo,Haskovsko – teke[3] with tiurbe[5]
2. Bivoliane, Haskovsko – tiurbe na Elmal baba
3. Dambala site, Momchilgradsko – 3 tiurbet and healing spring
4. Zvezdelina, Momchilgradsko – tiurbe on Siurmeli baba
5. Hamlet Gasak, Momchilgradsko – tiurbe on Kazer baba
6. Hamlet Postnik, village Nanovitza, Momchilgradsko – tiurbe on Ahat baba
7. Podkova, Momchilgradsko – mosque of seven virgins (cemetery forest)
8. Dagdovnik, Krumovgardsko – tiurbe on Iamur baba
9. Nova Zagora – tiurbe on Kademli baba
10. Balchik – tiurbe on An Iazal baba
11. Isperih – tiurbe on Demir baba

[3] teke – monastery

[5] tiurbe – tomb