

## Centralised National Risk Assessment for Bulgaria

### Controlled wood category 3: Wood from forests in which high conservation values are threatened by management activities

#### Overview

Bulgaria is located in the central part of the Balkan Peninsula and is characterised by a mountainous relief. Forest management in Bulgaria started 140 years ago. Presently, forest areas cover 4,222,874 hectares (ha) or 38% of Bulgaria's land area (11,063,000 ha). Nearly 3,795,000 ha of the total forest area (89%) are covered by forests, the remaining of the forest area (11%) includes forest pastures and rock screes among forest stands. Forest management types fall into three main categories:

- 1) State forest areas, covering 3,092,386 ha (73.23%), of which:
  - 2,906,508 ha (68.83%) are managed by the state forest enterprises,
  - 174,463 ha (4.13%) are managed by the Ministry of Environment and Waters (including the national parks and the natural reserves),
  - 11,415 ha (0.27%) are managed by the training and experimental forest units under the Forestry University, and
  - 431 hectares along the river Maritsa are managed by Irrigation Systems JSC.
- 2) Non-state forest areas, covering 1,042,101 hectares (24.68 %), of which:
  - 551,334 ha (13.06%) are municipal forest areas,
  - 427,573 ha (10.13%) are forest areas owned by private individuals,
  - 42,849 ha (1.01%) are forest areas owned by legal entities, and
  - 20,345 ha (0.48%) are forest areas owned by religious communities.
- 3) Afforested agricultural areas, covering 88,387 ha (2.09%).

All forest areas outside natural reserves and national parks are subject to silviculture activities under the Forestry Act (2011). The management of farmland forests is limited, and is regulated by the Act for Protection of Agricultural Property and by the Forestry Act. Forestry in national parks is limited, and is regulated by the Protected Areas Act.

According to Article 5 of the Forestry Act, the forest areas are divided into three functional categories:

1. Protective forest areas - forest which should be managed in such a way that soil, water and infrastructure are protected and erosion prevented, etc.
2. Special forest areas - protected areas and Natura 2000 sites, managed in such a way that biodiversity is protected, and
3. Timber-extraction forest areas - intensively managed forests for wood production.

Nearly 68% of the Bulgarian forest areas have protective and/or special functions. Natural, undisturbed forests cover an area of no more than 200,000 ha, or about 4.7% of all forests in the country (WWF 2014). They are situated in forest reserves, national parks and inaccessible forest basins, providing exceptional water protection and erosion control functions. Less than 2% of all forests in Bulgaria are strictly protected. Specifically, logging is fully restricted in natural reserves and the core zones of the national parks, while in forests with special and/or protective functions logging can occur but with restrictions.

Bulgaria has developed a Guideline for identification of High Conservation Value (HCV) Forests (WWF, 2016). However, according to WWF's database, based on HCVF identification and required HCVF reports from forest enterprises (not published), less than 30% of Bulgaria's forest areas are considered to be of high conservation value, including national parks, nature parks and individual certified forest management units (25% certified forest and 5% protected areas with management plans). Nevertheless, basic requirements for the protection of forests falling into some of the HCV categories are covered by the national legislation. For instance, the Biodiversity Act requires that any forest management plan should be in compliance with the protection regimes concerning natural habitats and wild species under the Habitats Directive within Natura 2000. The Protected Areas Act requires that the forest management plans are in compliance with the provisions and restrictions on protected areas management plans or orders for designation. However, inadequate implementation of the environmental and forestry legislation compromises the protection of HCV forests. In addition, the weakness of the State policy with respect to nature protection causes problems linked to land ownership; for example, for reasons of job security, State forest enterprises will often seek State and EU subsidies to log in areas that are uneconomical, whereas private owners will not – precisely because it is uneconomical and they are entitled to compensation for setting aside protected sites.

Governance of forest management for State land in Bulgaria (exclusive natural reserves and national parks), including administration of the land, is the responsibility of the Ministry of Agriculture and Food. The Ministry of Agriculture and Food also supervises forest management carried out by non-State owners. Nature protection is the responsibility of the Ministry of Environment and Water (MoEW), with several options for supporting protected sites under private ownership, i.e., subsidies, compensation, agreements, etc. However, the options for supporting protected sites within State-owned and managed forests are limited and often obstructed or negatively influenced by interference from the Ministry of Agriculture and Food, e.g., seeking exceptions to strict protection so that logging can take place.

Overall, nature conservation beyond what is required by law and/or certification is relatively weak due to the inadequate enforcement of protected site nature management plans (for ecosystems, habitats, species) and the high level of interest of State and non-State owners in profits from forest management linked to timber extraction. Nature protection in farmland forests is under higher risk due to unclear

management regulations in the Forestry Act. Less than 25% of the forest areas in Bulgaria are FSC certified. Nevertheless, as a result of different flaws in the certification process, areas of HCV in many certified forest management units are also not properly protected.

Bulgaria has one of the highest levels of biodiversity in Europe. incl. 94 species of mammal, 383 bird species, 36 reptile species, 16 amphibian species, 27,000 insect species, between 35,000 and 37,500 plant species, and more than 500 species of fungus. Nearly 5% of the flora, 8.9% of the non-insects and 4.3% of the insect species are endemic. Bulgaria ratified the Convention on Biological Diversity on 29 February 1996. It encompasses parts of the Alpine, Black Sea and Continental biogeographic regions. Bulgaria's forests are habitat to more than 80% of the country's protected plant species, more than 60% of its endangered animals, and 60% of the priority natural habitats in Bulgaria. The number of species endemic to the Balkans and Bulgaria is relatively high – nearly 1,700 species; nearly 5% of the flora, 8.9% of non-insects, and 4.3% of the insect species.

The positive effect on forest biodiversity is interrelated to increasing forest areas and the gradual conversion of artificial forests to semi-natural forests. At the same time, the negative impacts on forest biodiversity are associated with unregulated logging, logging of old-growth forests in inaccessible basins, removal of biotope trees and deadwood, poaching, illegal mining, uncontrolled grazing, afforestation with alien trees, and pollution. In general, the conservation status of most forest habitats and protected species in Bulgaria for the period 2006-2012 is reported as unfavourable under Art. 17 of the Habitats Directive. For better implementation of the CBD, the government is mainly focusing on the development of legal measures for sustainable management of forests in Natura 2000 sites.

Lastly, Bulgaria's score on the 2015 Corruption Perception Index (CPI) was 41 (on a scale from 0 to 100, where 100 is the lowest level of corruption), and ranked 68 out of 167 countries (16). This means there is a relatively high perception that Bulgaria is a corrupt country.

### Experts Consulted

	Name	Email	Address	Job title	Organisation	Area of expertise (category/sub-category)	Contact made	Meeting time/date
1.	Alexandar Dountchev	<a href="mailto:adountchev@wwfdcp.bg">adountchev@wwfdcp.bg</a>	Sofia city	Forest officer	WWF	All 3		
2.	Pencho Dermendzhiev	<a href="mailto:p.t.dermendzhiev@gmail.com">p.t.dermendzhiev@gmail.com</a>	Plovdiv city	Director	Forest Protection Station	All 3		

### Risk assessment

Indicator	Sources of Information	HCV occurrence and threat assessment	Functional scale	Risk designation and determination
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3.0	4, 5, 7, 9, 11, 12, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39	<p><b>HCV Occurrence</b></p> <p>Reports on forests with high conservation value in Bulgaria have been prepared only for forest management units that are in the process of FSC certification or have already been certified. Studies have been performed in areas including 41 state forest units, one municipality, and one private forest. After examining the quality and scope of some of the reports on HCV forests, a number of deficiencies and flaws have been found, such as a lack of identified HCV forests (e.g. HCV categories 1.2-1.3, 3, etc. in the Bulgarian HCVF Guideline), a lack of appropriate management measures, etc.</p> <p>Conservation areas have been designated as protected at a national or EU level (i.e. Natura 2000). However, individual complexes of undisturbed forests (incl. old-growth forests) across the country are still inadequately protected. Currently, the distribution of old-growth forests outside strictly protected areas is being mapped by WWF Bulgaria. In the period 2013-2015, 21,000 ha of old-growth forests have been identified across Bulgaria outside strict protected areas.</p> <p>For the current assessment, HCV areas were defined and aligned with the national HCV guidance (WWF, 2016) as follows:</p> <ul style="list-style-type: none"> <li>• HCV 1 – Protected areas. Concentrations of biological diversity, incl. endemic, rare, protected and threatened species with global, regional or national importance.</li> </ul> <p>Data sources used for identification of HCV 1:  Register of Protected Areas and Natura 2000 Sites  IUCN Red List data, the Red Data Book of Bulgaria  Atlas of Endemic Plants in Bulgaria  Bulgarian National HCV Guidance (WWF)  Specialised field inventories</p> <ul style="list-style-type: none"> <li>• HCV 2 - Ecosystems and mosaics of ecosystems at the landscape level. Undisturbed forest landscapes, large ecosystems at the landscape level, and mosaics of ecosystems of global, regional or national importance, where there are viable populations of most naturally occurring species in their natural distribution patterns and abundance.</li> </ul> <p>Bulgarian National HCV Guidance (WWF), annex III</p>	National	<p>“Low Risk”</p> <p>The data on HCV occurrence is sufficient for the area(s) under assessment;</p> <p>AND</p> <p>The data on the threats to HCVs from management activities is sufficient;</p> <p>OR</p> <p>Data confirms HCV are not present in the area under assessment.</p>
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		<p><a href="http://www.globalforestwatch.org/map">http://www.globalforestwatch.org/map</a></p> <ul style="list-style-type: none"> <li>• HCV 3 - Ecosystems and habitats (incl. Natura 2000 habitat types). Rare, protected or endangered ecosystems, habitats or refugia (incl. old-growth forests) Database of MoEW on the mapping of natural habitats in Natura 2000 Forest inventory Bulgarian National HCVF Guidance (WWF) annex IV</li>   <li>• HCV 4 - Ecosystem services of critical importance. Basic ecosystem services of critical (indispensable) importance in concrete situations, incl. protection of water-catchment areas and control of erosion of vulnerable soils and slopes. Orders issued under Ordinance No.3 of 2002 on the terms and conditions for research, design, approval and operation of sanitary zones around water sources and facilities for drinking water supply, and around sources of mineral water used for therapeutic, prophylactic, drinking and hygiene needs Bulgarian National HCVF Guidance (WWF) Forest inventory</li>   <li>• HCV 5 – Main needs of local communities. Forest sites and resources which are fundamental to satisfying the basic necessities of local communities. Forest inventory Bulgarian National HCVF Guidance (WWF)</li>   <li>• HCV 6 - Cultural values. Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical importance, and/or of critical (indispensable) importance to the traditional culture of local communities and indigenous peoples, identified with their participation, incl. cultural, ecological, economic or religious/spiritual importance. Forest inventory Bulgarian National HCVF Guidance (WWF)</li> </ul>		
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		<p><b>Identification and Evaluation of Threats and Safeguards</b> The Bulgarian HCVF Guidance provides a good foundation for identifying the HCVs relevant for Bulgaria.</p> <p>The lack of identification of HCV areas in more than 70% of the forest areas in Bulgaria means that their sustainable management, monitoring and protection cannot be guaranteed. At the same time, special measures for protection of forest biodiversity, subject to HCV 1-3, are foreseen only for Natura 2000 sites, which cover 50% of the forest areas in Bulgaria. Further, regardless of the protection status of Bulgaria's forests, NGO reports and media articles reveal regular cases of forest management activities which threaten HCV areas. Thus, there is sufficient data available to assess the risks to the identified HCVs.</p> <p>The data on HCV occurrence is sufficient for the area(s) under assessment; AND The data on the threats to HCVs from management activities is sufficient; OR Data confirms HCV are not present in the area under assessment.</p>		
3.1 HCV 1	2, 3, 6, 8, 13, 14, 17, 22, 37, 39, 40, 15, 24, 25, 26, 29, 34, 35, 42, 43, 44, 45	<p><b>Occurrence</b></p> <p>In Bulgaria, all forests in protected areas are officially declared to be of HCV 1 value (i.e. HCV category 1.1 in the Bulgarian HCVF Guideline), including:</p> <ol style="list-style-type: none"> <li>1. Forest lands in reserves, managed reserves, national parks, protected sites, natural attractions, designated under the Protected Areas Act;</li> <li>2. Forest lands within the zones of nature parks devoted to biodiversity conservation according to the relevant management plans;</li> <li>3. Forest lands in nature parks that have no constituent documents;</li> <li>4. Forest lands within the Natura 2000 protected sites designated under the Biodiversity Act, which transposes the Habitats and Birds Directive of the EC.</li> </ol> <p>All forests with rare, threatened and endangered (RTE) species listed in Annex I of the WWF HCVF Guidelines also have HCV 1 value, defined as HCV 1.2. Annex I is based on the IUCN Red Data</p>	National	"Specified Risk" HCV 1 is identified and/or its occurrence is likely in the area under assessment and it is threatened by management activities.

		<p>list, the Red Data Book of Bulgaria, and the Atlas of Endemic Plants in Bulgaria. Lastly, sites with critical concentrations of species listed in Annex II of the HCVF Guidelines are also of HCV 1 value – HCV 1.3.</p> <p>Areas covered by the Protected Areas Act account for slightly more than 5% of the territory of Bulgaria, while Natura 2000 sites cover more than 33%. 50% of Bulgarian forests are protected under the Protected Areas Act and the Biodiversity Act (Natura 2000), while the RTE species are also reported to occur outside protected areas (BAS, 2015). In essence, there is a high likelihood of HCV 1 forests providing habitat to endemic, rare, protected and threatened species outside protected areas. HCV 1 forest areas with a known high concentration of biodiversity only exist in the national parks, in some parts of the certified forest management units, and in some parts of nature parks with developed management plans (e.g. Vitosha, Belasitsa, Vrachanski Balkan, etc.).</p> <p>Bulgaria has one of the highest levels of biodiversity in Europe.. Half of the Red List flora species in Bulgaria are dependent on forests for their habitat, mainly in Pirin Mountain (93 species), Strandzha Mountain (83 species), the Central Balkan range (75 species), Slavyanka (62 species), Rila Mountain (62 species), Rhodopes (56 species), etc. The old forests in these mountains, parts of which are still not protected, are also the last habitat of 18 mammal species, 18 bird species and 4 reptile species with conservation significance (RTE). Therefore, there is a high likelihood of areas of HCV existing outside the protected areas listed above.</p> <p><b>Identification and Evaluation of Threats and Safeguards</b></p> <p>Bulgaria is a signatory to the CBD, and according to its 5th national report it has, at least on paper, effectively developed its network of protected areas (mainly Natura 2000 sites) and its legal framework. Forest management in protected areas and Natura 2000 sites is subject to the requirements of the Protected Areas Act and, respectively, the Biodiversity Act, enforced by the Ministry of Environment and Waters (MoEW). Specific measures are also imposed by the management plans of the protected areas and</p>		
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		<p>Natura 2000 sites, if the management plans exist (currently management plans are developed only for the national parks, most of the nature parks, parts of the natural reserves and protected landscapes, as well as for around 10 Natura 2000 sites). Such measures include, mainly, the protection of old-growth forests, riparian forests, biotope trees and deadwood, a ban on logging during the breeding period, the application of felling methods with lower intensity which manage multi-age, heterogeneous forest structures, the use of natural regeneration, application of harvesting techniques which preserve the forest soils, landscapes and remaining vegetation, etc. Despite the strict legal framework and the control of several relevant state institutions, inadequate implementation of the environmental and forestry legislation leads to systematic violation of the above-listed and other requirements for the management of HCV 1 in protected areas and Natura 2000 sites [15, 24, 25, 26, 29, 34, 35, and 45].</p> <p>This is mainly a result of the low qualifications of forest workers, the strong political and economic pressure on forest managers to increase yields, as well as the high level of corruption in the country – Bulgaria scored 41 points on the Corruption Perception Index in 2015 (on a scale from 0 to 100, where 100 is the lowest level of corruption) and ranked 68<sup>th</sup> out of 167 countries (Transparency, 2015). Also see CW CNRA Category 1, indicator 1.9.</p> <p>As described in indicator 1.9 of CWRA Category 1, numerous cases are documented (incl. in protected areas) of logging of habitat trees, logging during the breeding period, illegal logging, poaching, etc. [15, 24, 25, 26, 29, 34, 35, 45]. In general, most of the deadwood and habitat trees are regularly removed from forests as part of sanitary logging of individual trees. In practice, however, the aim of sanitary logging is the supply of firewood for local communities, rather than solving silviculture problems. For instance, the volume of sanitary logging in some forest management units reaches 20% of the total logging volume. Logging has also been permitted in HCV 1 forests in the breeding period of threatened birds – designated as 1 January-1 July (Personal observations, Alexander Dountchev).</p> <p>Illegal logging is posing a further threat to HCV 1 areas, particularly</p>		
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		<p>in old-growth forests, since the most economically attractive trees, harvested illegally, are the oldest biotope trees. Poaching is reported to be one of the reasons for the unfavourable conservation status of protected species such as the grey wolf (<i>Canis lupus</i>) and the brown bear (<i>Ursus arctos</i>).</p> <p>HCV 1 areas are particularly under threat outside protected areas since forest workers are not qualified or trained to identify HCV 1, and their occurrence is most often not registered during forest inventories. The main potential threats for unidentified HCV 1 areas include habitat removal or fragmentation as a result of logging, or the introduction of alien/invasive species during transport in the forests, afforestation, or other decorative plantings. Therefore, the lack of effective identification and relevant legal conservation measures for HCV 1 areas outside protected areas and certified forest management units leads to an additional threat to areas categorised under this HCV.</p> <p>HCV 1 is identified, and/or its occurrence is likely in the area under assessment, and it is threatened by the poor planning of management activities, or as a result of inadequate control by the relevant authorities which is resulting in habitat removal and fragmentation by forest management or illegal logging activities. The potential threat should be considered also in the light of the precautionary principle.</p>		
3.2 HCV 2	5, 41, 45	<p><b>Occurrence</b></p> <p>Forests falling under the HCV 2 category are identified by the following criteria according to the Guideline for identification of High Conservation Value (HCV) Forests (WWF, 2016):</p> <ul style="list-style-type: none"> <li>- “naturalness” – &gt;70% in Strandzha, Sredna gora, etc. and &gt;80% in Pirin, Rila, etc.;</li> <li>- “fragmentation” – &lt;7% in Strandzha, Sredna gora, etc. and &lt;5% in Pirin, Rila, etc.;</li> <li>- “minimal size of the habitat area of the populations of naturally occurring species” - &gt;40,000 ha in Strandzha, Sredna gora, etc. and &gt;50,000 ha in Pirin, Rila, etc.</li> </ul> <p>All forest compartments falling within this conservation value are</p>	National	HCV 2 is identified and/or its occurrence is likely in the area under assessment, but they are effectively protected from threats by management activities.

		<p>listed in Annex III of the HCV Guidelines.</p> <p>In practice, HCV 2 applies to all forests in Bulgaria which are subject to logging but are not intensively fragmented by villages, farmlands or forest roads, i.e., more than 60 % of the forests in all forest management units meet the criteria for identification as being of HCV 2.</p> <p>There are no forests in Bulgaria that fall under the “intact forest landscapes” definition – according to Global Forest Watch there are no Intact Forest Landscape in Bulgaria.</p> <p><b>Identification and Evaluation of Threats and Safeguards</b></p> <p>Special measures for management of HCV 2 forests – e.g. no fragmentation or reduction of forest cover, no artificial regeneration, protection of 2% of old-growth forests, etc. – are required only in forest management units that are certified for responsible forest management and those that are to be certified. In the rest of the public and private forests there are no restrictions for the prevention of violations of the basic functions of HCV 2 forests as result of forestry, tourism or hunting activities. Nevertheless, in both certified and non-certified forests, planned forestry activities often lead to an increase in the fragmentation of forest landscapes and a reduction of the naturalness of the forests affected. Usually such activities include the construction of a dense network of forest roads, cable lines for wood extraction, or sanitary logging by means of clear cuts.</p> <p>HCV 2 forests are identified as being threatened by forest management activities mainly through the reduction of naturalness and fragmentation.</p>		
3.3 HCV 3	2, 3, 6, 8, 13, 14, 17, 21, 22, 38, 40, 15, 25, 26, 27, 31, 35, 39, 45	<p><b>Occurrence</b></p> <p>According to the national HCV Guidelines, all forests categorised as HCV 3 are listed in Annex 4 of the HCV guidelines, including 47 RTE ecosystem types (e.g. European Salix alba forests (G1.111 under EUNIS), Southern Alnus glutinosa galleries (G1.131), Flood-plain or riverine Alnus woods of slow rivers (G1.213), Residual medio-European fluvial forests (G1.222), South-east European Fraxinus-Quercus-Alnus forests (G1.223), Mediterranean riparian</p>	National	<p>HCV 3 is identified and/or its occurrence is likely in the area under assessment and there are threatened by forest management activities; AND/OR</p> <p>There is no progress in achieving Aichi biodiversity</p>

		<p>Populus forests (G.1.31), Platanus orientalis woods (G1.38), Medio-European acidophilus Fagus forests (G1.61), Pannonian Quercus pubescens woods (G1.732), Helleno-Balkanic Castane Sativa forests (G1.7D1), Moesian Abies alba forests (G3.16), etc.), as well as old-growth forests. In essence, the natural habitats defined under Annex I of the Habitats Directive represent most of the HCV 3 forest types found in Bulgaria.</p> <p>It is considered that a significant part of the unique forest ecosystems of Bulgaria are included in protected areas and Natura 2000 sites, categorised as special forest areas under the Forest Act, and their distribution in the ecological network has already been described. The Natura 2000 sites, in particular, cover 33% of the territory of Bulgaria (compared to the EU average of 18%) and &gt;50 % of the forest areas in the country. In total there are 360 Natura 2000 sites designated in accordance with two major environmental EU Directives – Directive 92/43/EEC conservation of natural habitats and of wild fauna and flora (hereinafter briefly Habitats Directive) and Directive 2009/147/EC on the conservation of wild birds (hereinafter Birds Directive). Both directives are reflected in the Bulgarian legislation through the Biological Diversity Act. As a result thereof, special protection measures shall be included during the development of the forest management plans in Natura 2000.</p> <p>However, there is no comprehensive assessment in Bulgaria of the ecosystem types located outside protected areas and Natura 2000 sites. The area of the protected ecosystems is not enough to guarantee the protection of forests with HCV 3 values outside protected areas and Natura 2000 sites, because nearly 50 % of the Bulgarian forests are not protected at all. Presently, some forest types have low natural occurrence, including many forest types that had wider distribution in the past and/or were commonly represented in a larger region, e.g. old-growth forests, oak forests, riverine forests, etc. Given the RTE of these forest types, more stringent forest management measures should be applied to ensure that forests of HCV 3 designation are not threatened, including consideration of placing some of these areas under strict protection. For instance, the old-growth forests cover an area of no more than 200,000 hectares, or about 4.7 percent of all forests in the country.</p>		<p>targets.</p>
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		<p>More than half of the old-growth forests are not strictly protected. In the period 2013-2015, more than 21,000 ha of old-growth forests outside protected areas were mapped by WWF, and the process of mapping is ongoing.</p> <p><b>Identification and Evaluation of Threats and Safeguards</b></p> <p>The management of natural forest habitats in protected areas (excl. natural reserves and national parks) and Natura 2000 sites (categorised by the Forests Act as special forest areas) is regulated by the Ordinance for Fellings in Forests under the control of the Executive Forest Agency, and is subject to appropriate assessment by the MoEW under Article 31 of the Biodiversity Act. Accordingly, the natural forest habitats in the special forest areas should be managed in such a way that their HCV is protected, i.e. by not logging old-growth forests, biotope trees, deadwood and trees in river beds, by allowing for natural regeneration, by development of multi-age and multi-species forest stands, by applying nature-friendly harvesting techniques (e.g., selection logging) etc. Despite the strict regulations and the fact that Natura 2000 covers more than 50% of the forest areas in Bulgaria, there are numerous cases of illegal forest management practices, including in Natura 2000 sites, as well as logging in old-growth forests, which is forbidden by the Ordinance for Fellings in Forests [15, 25, 26, 27, 31, 35, 45]. As described in indicator 1.9 of the CWRA Category 1, these examples of ineffective protection of HCV 3 are mainly a result of the low level qualifications of the forest workers, the strong political and economic pressure on forest managers to increase yields, as well as the high level of corruption in the country – Bulgaria scored 41 points on the Corruption Perception Index in 2015 (on a scale from 0 to 100, where 100 is the lowest level of corruption).</p> <p>It should be noted that the Ordinance for Inventory and Planning in Forest Areas allows the inventory of HCV 3 forests during forest planning, both inside and outside protected areas. However, identification and sustainable management for natural forest habitats under Annex I of the Habitats Directive is obligatory only for Natura 2000 sites.</p> <p>Thus, outside those sites, it is common that HCV 3 forests are not</p>		
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		<p>identified, and specific conservation measures are only required under voluntary certification schemes, meaning that forest management is also threatening HCV 3 forests through habitat loss and fragmentation.</p> <p>In its 5th national report, Bulgaria's MoEW states that the country is progressing towards the CBD commitment (Aichi targets) mainly through the recent development of its network of protected areas (e.g. Natura 2000 sites); however, it also states that by the end of 2013, 1,009 protected areas had been declared, with a total area of 584,587.1 ha, accounting for about 5.3% of the country. Given the fact that the Natura 2000 sites are under threat of illegal logging and most of the sites do not have management plans yet (only 6 management plans of all 352 Natura 2000 sites are adopted), the evidence indicates that Bulgaria is still falling short of meeting its CBD commitments.</p>		
3.4 HCV 4	13, 17, 20, 23, 26, 27, 28, 30, 45, 46, 47	<p><b>Occurrence</b></p> <p>According to the national HCV Guidelines, HCV 4 relates to the important ecological functions of forests, particularly those categorised as protective forests under the Forest Act. In Bulgaria, HCV 4 is divided into five sub-categories:</p> <p>4.1 Forests for watershed protection  4.2 Forests critical to water catchment areas  4.3 Forests of crucial importance for erosion control  4.4 Forests with fire restriction features  4.5 Forests critical to agriculture and fisheries</p> <p>• 4.1 Forests for watershed protection. This subcategory includes forests, which are the only watershed sources for drinking water in Bulgaria. HCV 4 includes all forest areas classified under sanitary zones 1 and 2 of sources of drinking water as defined under Ordinance No.3 of 2002 on the terms and conditions for research, design, approval and operation of sanitary zones around water sources and facilities for drinking water supply and around the sources of mineral water used for therapeutic, prophylactic, drinking and hygiene needs. Forests growing near sources of drinking water outside certain official sanitary zones are also considered to belong to HCV 4. In this case, the HCV 4 forests include the river bed and</p>	National	<p>"Low Risk"</p> <p>HCV 4 is identified and/or its occurrence is likely in the area under assessment and there are threatened by management activities.</p>

		<p>flood plains within a distance of 3,500 m above the water abstraction and within 50 m below it, with a width of not less than 1,500 m on both sides of the river.</p> <ul style="list-style-type: none"> <li>• 4.2 Forests critical to water catchment areas. Forests in Bulgaria are an important factor in maintaining terrain stability and controlling erosion. They play an important role in flood prevention, control of river flows, and quality of water. When the forest covers a large part of a watershed, it plays a critical role in maintaining water quality and quantity. This subcategory includes: All forests in the water catchments of torrential river beds with a forest cover of less than 40%; <i>Pinus mugo</i> communities; The upper forest line under the Forest Act; All riverine forests within the flooded area of rivers; All forests along the Danube river enclosed by dikes, forests on islands; All forests along the rivers Maritsa, Tundja, Mesta, Struma, Arda, etc., within a 100 m wide buffer area; All forests classified as belonging to sanitary zones 1, and around dams providing mainly drinking water.</li> <li>• 4.3 Forests of crucial importance for erosion control. This subcategory includes the following types of forests: forests on slopes of &gt;30° inclination (or less when situated above arable lands and meadows on a slope of &gt;10° inclination and length &gt;200 m); Forests established on the basis of technical projects for erosion control, as well as correction, coast, or other forest belts; Forests protecting settlements or communication infrastructure located in the path of avalanches (according to data from the Mountain Rescue Service).</li> <li>• 4.4 Forests with fire restriction features. Deciduous forests located between conifer plantations, between coniferous plantations and settlements, between coniferous plantations and farm lands, having a width of planting of at least 100 m and a maximum of 250 m, and a composition comprising all deciduous species without birch, acacia and poplar cultivars.</li> </ul>		
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		<ul style="list-style-type: none"><li>• 4.5 Forests critical to agriculture and fisheries. All forests with critical impact on forest functions, which are important for agriculture, the state of fish stocks, the protection of technical infrastructure, including: Buffer forests located adjacent to farmland established or operating as forest belts where the width of the forest strip is not greater than 100 m; Riparian forests dominated by various representatives of the genus Salix along the Danube and its islands flooded at high water levels of the river, and on the banks of the rivers Maritsa, Tundzha, Mesta, Struma, Arda, Lom, Tsibritsa, Ogosta, Skat, Iskar, Yantra, Vit, Sazliika, Stryama Osam, Rusenski Lom, Kamchia, Veleka Rezovska (Bulgarian coast). Forests designed to protect civil engineering structures.</li></ul> <p>The majority of forests categorised as HCV 4 are spatially defined when the forest inventory is conducted and forest management plans are developed. For instance, Bulgaria's water protection forests occupy an area of 248,943 ha, which is 6.1% of the total forest area. Of these, 72.64% are state owned, 11.41% municipal, 9.89% privately owned, and 6.06% under other ownership. These forests accumulate between 1-1.5 billion m<sup>3</sup> of water annually. By their nature, these forests serve as multi-equalisers, resulting in a steady flow all year of conditionally clean water through economic water infrastructure to water users. Municipalities and plumbing services are the competent authorities with regard to drinking water matters. The Ministry of Agriculture and Food and the Ministry of Environment and Waters provide monitoring of the national water supply.</p> <p><b>Identification and Evaluation of Threats and Safeguards</b></p> <p>In Bulgaria, HCV 4 forests are threatened by forest management activities, leading, for example, to negative impacts on the quality of drinking water, on the integrity of watersheds, and on the erosion control functions of forests [23, 26, 27, 28, 30, 45, 46].</p> <p>The most striking evidence of forest management activities significantly affecting water quality is present in the forests of Sevlievo city. These threats are due to felling and transportation of</p>		
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		<p>wood in wet weather, which affects the turbidity of the surface water used for drinking water.</p> <p>Transportation of wood in wet weather is causing line erosion along forest roads throughout the country. Illegal harvesting in forest areas (Asparuhovo-Varna, Batulja, etc.), along river beds, and on steep slopes across the country is considered to be a critical factor for the development of floods, and less often, of erosion.</p> <p>The rates of use of pesticides and fertilisers in forestry, mainly when working in tree nurseries and plantations, are much lower compared to the volumes used in agriculture. The average annual application of pesticides (active ingredient) is 2.1 kg/ha in the agricultural sector and 0.001 kg/ha in the forestry sector. However, these numbers do not include the annual amount of pesticides and artificial fertilisers used in nursery production. Observations show that there is well-known, documented evidence that activities in forest nurseries for the production of reproductive materials threaten water quality [47]. Furthermore, the extraction of nitrates from forest areas is usually in the range of 0-5 kg N/year for forests, and 30-120 kg N/year for agricultural land. Again, based on observations, there is no evidence that nitrates from forest areas threatens water quality.</p> <p>Thus, threats by forest management activities are identified in relation to erosion affecting rivers used for drinking water, as well as flooding which in turn is impacting water quality (forest critical for watershed protection and water catchment areas), as well as forests for erosion control.</p> <p>There are no threats identified with respect to fire-prevention and forests critical to agriculture and fisheries.</p>		
3.5 HCV 5	15, based on general observation, corroborated by expert review of this HCV CNRA	<p><b>Occurrence</b></p> <p>According to the national HCV Guidelines, HCV 5 includes all forest areas and forest resources which are vital to meeting the basic needs of the local population. Subject to the dependency of the local population, the following forest resources may be characterised as HCV 5:</p>	National	“Low Risk” There is no threat to HCV 5 present in the area under assessment from management activities;



		<p>Firewood and timber for private use;          Pasture and fodder - hay and foliage;          Mushrooms;          Other forest resources, such as herbs, forest fruits, snails, etc.;          Drinking water.</p> <p>Most Bulgarians outside the big cities rely exclusively on firewood taken from forests. Collection of herbs, mushrooms, and forest fruits can also be a leisure activity, as well as a main source of income for many local people. Forests are also the main source of drinking water in Bulgaria.</p> <p><b>Identification and Evaluation of Threats and Safeguards</b></p> <p>With respect to forest resources, the basic needs of local communities are protected under Articles 111 and 117 of the Forest Act, which grant the right to personal use of timber and non-timber forest products (hay, herbs, mushrooms, grazing, etc.). The supply of firewood forms more than 50% of Bulgaria's wood consumption.</p> <p>In general, the personal use of firewood is allowed on the basis of a logging permit provided by the forest owner (usually the state) for a fee, while the collection of non-timber products for personal use is free of charge. Overall, forest managers in Bulgaria respect the rights of people connected to HCV 5 forests, though sometimes, when there is insufficient communication between the state or municipal forest managers and the local communities, it is possible that the rights of local people, as defined in Articles 111 and 117 of the Forest Act, to use timber or non-timber products (e.g. livestock grazing, religious visits to forests, celebration of religious holidays, visiting summer resorts in forests, or hunting game) could be violated. However, no serious violations of HCV 5 have currently been registered or observed. See indicator 1.9. There are no conflicts between forestry and ensuring the basic need for mushrooms and firewood. Where forest management is causing injuries to trees it is good conditions for mushrooms and there are cutting of high-value timber as firewood.</p> <p>There is no threat from management activities to HCV 5 present in</p>		
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		the area under assessment.		
3.6 HCV 6	1, 10, 31, 36	<p><b>Occurrence</b> According to the national HCV Guidelines, HCV 6 includes forest areas which are crucial to preserving cultural values and traditions, religious and ethnic identity.</p> <p>Bulgaria has over 81 Orthodox churches and 11 Muslim monuments which fall within the boundaries of HCV 6 forests. All of the following are categorised as HCV 6 forests in Bulgaria:</p> <ol style="list-style-type: none"> <li>1. Forest areas within a buffer of 500 m around monasteries;</li> <li>2. Forest areas within a buffer of 100 m around chapels, shrines, holy springs, tekkes, listed in annex 7 of the national HCV Guidelines;</li> <li>3. Forest areas within the boundaries of cultural monuments or in their protected areas designated under the Law on Monuments (WSP);</li> <li>4. Forests within a buffer of 100 m around areas traditionally associated with the organisation of fairs, singing competitions and other events contributing to the preservation of cultural heritage and national traditions, listed in annex 7 of the national HCV Guidelines.</li> </ol> <p>Additional special measures for the protection of HCV 6 forests are prescribed only in forest management units which are certified or undergoing certification. Such measures can include reduction of logging intensity, preservation of characteristic forest elements (biotope or unusual trees), and bans on logging during the periods of regular visits to the sites categorised as belonging to HCV 6.</p> <p><b>Identification and Evaluation of Threats and Safeguards</b> Archaeological and historical monuments are protected by Article 5 of the Law on Cultural Heritage, which is monitored by the Ministry of Culture. All cultural sites and features of importance are registered by the Ministry of Culture, which supports publicly available databases, interactive maps and information.</p> <p>HCV 6 forests can be affected by forest logging, resulting, usually, in the removal of the oldest and most beautiful trees in the forests around those categorised as HCV 6. Monastery woods are also</p>	National	Specified risk

	<p>subject to illegal and semi-legal logging. In fact, there are still no economic incentives that would lead to a greater commitment by forest managers to implement best practices in the case of forestry activities that can cause damage or degradation of land on and around sites of national cultural importance.</p> <p>Sufficient buffers and protection measures for sites of cultural value have been applied mainly in certified forest management units.</p> <p>HCV 6 is identified and/or its occurrence is likely in the area under assessment and there are threats posed by management activities.</p>		
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### Recommended control measures

Indicator	Recommended control measures
3.0	No control measures (indicator serves for risk assessment purpose only).
3.1 HCV 1	<p>Country Specific</p> <p>RTE and critical concentrations of species should be identified in the field by scientific experts and the results made subject to public disclosure and consultation with the MoEW, scientific organisations and NGOs; forest management activities should be adapted to the scientific requirements for the protection of HCV 1.</p> <ul style="list-style-type: none"> <li>• Harvesting does not take place where species concentrations are likely to occur (example as demonstrated by established conservation set-asides, habitat corridors, etc) , and/or specific measures that are designed to protect the HCV value is applied as appropriate.</li> <li>• Tree species protected under HCV category 1 are not harvested</li> <li>• Evidence, where RTE species are known to occur, should be provided that forest management activities have been adapted to incorporate the scientific requirements for the protection of HCV 1 provided in Annex 1 of the HCV Guidelines (as demonstrated by forest management plans and/or independent 3rd party audits).</li> <li>• Inventory data for RTE must be available in the Forest Management Unit or to the environmental authorities, as well as the measures taken for protection of HCV 1 (incl. the management plans of protected areas), and checks must be undertaken that the planned forest activities are in compliance with the protection measures included in the forest management plans and/or independent third party audits.</li> <li>• <a href="http://natura2000.eea.europa.eu/#">http://natura2000.eea.europa.eu/#</a> can be used to identify Natura 2000</li> <li>• <a href="http://gis.wwf.bg">http://gis.wwf.bg</a> can be used to identify old forests in Bulgaria.</li> </ul>
3.2 HCV 2	<ul style="list-style-type: none"> <li>• Evidence shall be provided of restoration activities and plans to reduce HCV 2 fragmentation (e.g. remediation of previous damage to ecosystems, reintroduction of hunted species, creation of wildlife corridors between forest blocks). Among other, evidence could be in the form of management plans, maps and satellite image.</li> <li>• Evidence shall be provided that reduced impact harvesting operations (e.g. reduced impact logging techniques or continuous forestry cover) have been included in forest management plans to minimise forest fragmentation, including through roads and forest cover. Among other, evidence could be in the form of management plans, maps and satellite image.</li> </ul>

	<p>Country Specific.</p> <ul style="list-style-type: none"> <li>• Evidence should be provided that forest management activities have been adapted to come into line with the Bulgarian HCV Guidelines section on “Requirements of HCV2” (e.g. logging should not reduce the forest cover, 2% of the forest area is set aside for protection of old-growth forests, the anthropogenic fragmentation of forest areas is limited etc.) through demonstration of forest management plans and/or an independent third party audit on the implementation of the HCV protection measures in line with the Bulgarian HCV Guidelines section on “Requirements of HCV2”.</li> </ul>
3.3 HCV 3	<p>Material shall not originate from areas where HCVs are present, unless specific measures that are designed to protect the HCV inherent in the ecosystem (e.g. logging in areas of rare, threatened or endangered ecosystems is designed to protect the extent and values of these ecosystems) are in place.</p> <ul style="list-style-type: none"> <li>• <a href="http://natura2000.eea.europa.eu/#">http://natura2000.eea.europa.eu/#</a> can be used to identify Natura 2000</li> <li>• <a href="http://gis.wwf.bg">http://gis.wwf.bg</a> can be used to identify old forests in Bulgaria.</li> </ul> <p>For any wood supply areas overlapping with RTE ecosystems listed in Annex 4 of the HCVF guidelines, including 47 RTE ecosystem types, and/or the natural habitats defined under Annex I of the Habitats Directive, representing most of the HCV 3 forest types found in Bulgaria, seek:</p> <ul style="list-style-type: none"> <li>• Evidence that planned forest management activities are in line with the scientific requirements for the protection of HCV 3 as provided in Annex 4A of HCV Guidelines, and evidence of implementation is required.</li> </ul> <p>HCV3, shall be mapped by experts and the results made and made subject to public disclosure and consultation with the MoEW, scientific organisations and NGOs;</p> <ul style="list-style-type: none"> <li>• Require the inventory data for HCV 3 forests, and the measures for their protection, to verify that the forest management plans or the planned forest activities are in compliance with the HCV 3 protection measures available in the HCV Guidelines and the national Guideline for Management of Natura 2000 Habitats. This can also be done through independent third party audits on the implementation of the applicable legislation and the HCV 3 protection measures provided in Annex 4A of HCV Guidelines.</li> </ul>
3.4 HCV 4	<p>For 4.1 Forests for watershed protection: Material shall not originate from identified or mapped watersheds that supply local communities with drinking water, unless best practices of forest management are applied, including water course buffers, equipment restrictions, road building, and protection against contamination</p> <ul style="list-style-type: none"> <li>• Collect available data about all HCV 4.1 forests for watershed protection. If field surveys are needed do to lack of other evidence on watershed protection, the results shall be subject to public disclosure. If forest is confirmed to be important for watershed protection, seek evidence that the forest management plan is in compliance with Ordinance No. 3 of 16 October 2000 on the sanitary protection zones around water sources and facilities for drinking water supply.</li> </ul> <p>For 4.2 Forests critical to water catchment areas: • Collect available data about all HCV 4.2 forests critical to water catchment areas. If field surveys are needed due to lack of evidence on water catchment areas, the results shall be made public and open for opinions. If forest is confirmed to be critical to water catchment areas, seek evidence that the forest management plan is in compliance with the requirements for protection of HCV 4.2 forests in line with the HCV Guidelines, such as conducting no clear cuts, maintenance of permanent forest cover and irregular forest structures, etc.</p> <p>For 4.3 Forests of crucial importance for erosion control: • Collect available data about all HCV 4.3 forests of crucial importance for erosion control. This can be in the form of topographic maps and management plans. If field surveys are needed due to lack of information provided on erosion risk, the results shall be made subject to public disclosure. If forest is confirmed to be of crucial importance for erosion control, seek evidence that the planned forest management activities are in compliance with the requirements for protection of HCV 4.3 forests in line with the HCV Guidelines, such as maintenance of permanent forest cover, no logging in extreme conditions, etc.</p>

	<ul style="list-style-type: none"> <li>• Perform independent third party control on the implementation of the applicable legislation and the HCV 4 protection measures provided in the HCVF Guidelines. See the HCVF Guidelines 4.1,4.2,4.3,4.4 and 4.5 on page 27-34.</li> </ul>
3.5 HCV 5	Not applicable
3.6 HCV 6	<p>Material shall not originate from areas where HCVs are present, unless there is evidence that confirms that local communities and Indigenous Peoples are engaged, and their requirements are met.</p> <p>Country Specific</p> <ul style="list-style-type: none"> <li>• Confirm that the wood supply area contains no HCV 6 forests. All cultural sites and features of importance shall be available in the registers of the Ministry of Culture, the National Institute of Cultural Monuments and the municipalities, which support publicly available databases, interactive maps and information. If maps are not readily available, consultations with the Ministry of Culture, the National Institute of Cultural Monuments and the municipalities can clarify the cultural importance of a forest area.</li> </ul> <p>If HCV 6 forests are present, seek evidence that the forest management unit is from an area not within HCV 6 forests by consulting the Ministry of Culture or the National Institute of Cultural Monuments.</p> <p>If HCV 6 forests are within the FMU wood supply area, seek evidence from the forest management plan that FM activities are in compliance with the requirements for protection of HCV 6 forests provided in the Law on Monuments and Museums, the Forest Act, and the orders for designation of cultural monuments, and/or conduct an independent third party audit on the implementation of the applicable legislation and the HCV 6 protection measures provided in the HCV Guidelines.</p>