

# *The High Conservation Value Forest Toolkit*

**Edition 1**

**December 2003**

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WWF and IKEA Co-operation on Forest Projects. A partnership to promote responsible forestry.



## Executive Summary

All forests contain environmental and social values, such as wildlife habitat, watershed protection or archaeological sites. Where these values are considered to be of outstanding significance or critical importance, the forest can be defined as a High Conservation Value Forest (HCVF).

The key to the concept of High Conservation Value Forests is the identification of High Conservation Values, because it is the presence of High Conservation Values that determines whether a forest is designated a High Conservation Value Forest. High Conservation Values were first defined by the Forest Stewardship Council for use in forest certification, but the concept is increasingly being used for other purposes, including conservation and natural resource planning and advocacy, landscape mapping and in the purchasing policies of major companies. It has recently begun to appear in the discussions and policies of government agencies and institutional donors.

This rapid uptake reflects the elegance of the concept, which has moved the debate away from definitions of particular forest types (e.g. primary, old growth) or methods of timber harvesting (e.g. industrial logging) to focus instead on the values that make a forest particularly 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 protection of a forest area's important environmental and social values.

High Conservation Value Forests are those areas of forest that need to be appropriately managed in order to maintain or enhance the identified High Conservation Values. A High Conservation Value Forest may be a small part of a larger forest, for example a riparian zone protecting a stream that is the sole supply of drinking water to a community or a small patch of a rare ecosystem. In other cases, the High Conservation Value Forest may be the whole of a forest management unit, for example when the forest contains several threatened or endangered species that range throughout the forest. Any forest type – boreal, temperate or tropical, natural or plantation can potentially be a High Conservation Value Forest, because High Conservation Value Forest designation relies solely on the presence of one or more High Conservation Value.

While there has been considerable interest in the concept, there has been very little information or guidance on how it can be used in practice. This is partly because the issues involved are complex, which in turn means that many people are confused about what information they need to identify High Conservation Value Forests and how to use the ecological and social information that they already have. In many places the identification of High Conservation Value Forests can be achieved without the collection and analysis of large amounts of fresh data. Much progress can be made by reviewing and combining earlier studies that have already identified priority areas for individual values (such as rare habitats or watershed protection). In some cases, though, new

studies may be required to fill any gaps that remain, so that the full range of social and environmental values is covered.

The Toolkit is divided into three parts. After the Introduction, which is intended for all users, people will either use either Part 2 (national HCVF working groups) or Part 3 (forest managers). The three parts cover the following areas:

**Part 1: Introduction.** This gives a general introduction to the concept of HCVF and how different users can apply it.

**Part 2: Defining High Conservation Value Forests at a national level.** This part provides a practical methodology to be used at a national (or regional or sub-national) level for defining High Conservation Values. The intended audience is working groups, which will often be part of a standards development process.

This Toolkit provides a detailed framework on how to define each of the six types of High Conservation Value. This includes what information must be collated, questions that should be asked and guidance on how to structure the definition so that it can most easily be used by anyone wishing to find out if a particular forest contains any High Conservation Values. The Toolkit then provides some guidance on appropriate requirements for managing and monitoring each type of High Conservation Value.

Once High Conservation Values have been defined nationally, the High Conservation Value Forest concept can also be used by forest managers to meet standards related to High Conservation Value Forest; by certifiers assessing High Conservation Value Forest, by landscape planners trying to prioritise different land-uses and by purchasers, investors or donors implementing policies concerned with the concept of High Conservation Value Forest.

**Part 3: Identifying and Managing High Conservation Value Forests: a guide for forest managers.** In many countries, there is no ratified FSC certification standard or even a standards working group, and yet many forest managers are keen to comply with best management practice (equivalent to FSC or otherwise). This part of the Toolkit is aimed at forest managers, other land managers, investors, donors, and conservation practitioners who wish to implement HCVF in the absence of a ratified FSC national standard.

## **WWF and IKEA Co-operation - A partnership to promote responsible forestry**

WWF International and the IKEA Group have joined forces to promote responsible forestry. In a three-year co-operation, the organisations will carry out a series of forest projects that will contribute to the development of global toolkits on forestry issues. By strengthening multi-stakeholder based forest certification, and management and promoting legal compliance in forestry and trade, the projects are important steps in implementing IKEA's forest action plan and in achieving WWF's conservation goals. One of the projects is the High Conservation Value Forest (HCVF) Toolkit, with the aim to bring together the expertise of those working in this field and create a set of practical guidelines which can be used by forest managers, standard setters, certification bodies or anyone else using the concept to identify High Conservation Values and manage HCVFs. WWF has commissioned ProForest to co-ordinate the development of the HCVF Toolkit. For more information on the WWF/IKEA Co-operation please see [www.panda.org/forests4life](http://www.panda.org/forests4life) or via email [wwf-ikea-forestprojects@wwf.se](mailto:wwf-ikea-forestprojects@wwf.se).

***Part 1: Introduction***

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# 1. Introduction to the HCVF Toolkit

## *1.1. What are High Conservation Value Forests?*

Every forest has some environmental and social value. The values it contains may include rare species, recreational sites or resources harvested by local residents. Where these values are considered to be of outstanding significance or critical importance, the forest can be defined as a High Conservation Value Forest (HCVF).

The key to the concept of HCVFs is the identification of High Conservation Values (HCVs): it is these **values** that are important and need to be protected. High Conservation Value Forests are simply the forests where these values are found, or, more precisely, the forest area that needs to be appropriately managed in order to **maintain or enhance** the identified values. Identifying these areas is therefore the essential first step in developing appropriate management for them.

The HCVF concept was initially developed by the Forest Stewardship Council (FSC) for use in forest management certification and first published in 1999 (see Appendix 1). Under Principle 9 for FSC certification, forest managers are required to **identify** any High Conservation Values (HCVs) that occur within their individual forest management units, to **manage** them in order to maintain or enhance the values identified, and to **monitor** the success of this management.

Following its publication, the concept has been applied both within the FSC system and more broadly. For example, the approach is increasingly being used for landscape mapping and in conservation and natural resource planning and advocacy. It is also being used in purchasing policies and recently has begun to appear in discussions and policies of government agencies.

This rapid uptake reflects the elegance of the concept, which has moved the debate away from definitions of particular forest types (e.g. primary, old growth) or methods of timber harvesting (e.g. industrial logging) to focus instead on the values that make a forest particularly 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 protection of a forest area's important environmental and social values.

## *1.2. What are High Conservation Values?*

The key to the concept of HCVFs is the **identification and maintenance of High Conservation Values (HCVs)**. The FSC's definition of HCVs encompasses exceptional or

critical ecological attributes, ecosystem services and social functions<sup>1</sup>. These definitions are listed below, with an example for each.

<b>Box 1.1 The six types of High Conservation Value</b>
<p>HCV1. Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).</p> <p><i>For example, the presence of several globally threatened bird species within a Kenyan montane forest.</i></p>
<p>HCV2. Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.</p> <p><i>For example, a large tract of Mesoamerican lowland rainforest with healthy populations of jaguars, tapirs, harpy eagles and caiman as well as most smaller species.</i></p>
<p>HCV3. Forest areas that are in or contain rare, threatened or endangered ecosystems.</p> <p><i>For example, patches of a regionally rare type of freshwater swamp forest in an Australian coastal district.</i></p>
<p>HCV4. Forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).</p> <p><i>For example, forest on steep slopes with avalanche risk above a town in the European Alps.</i></p>
<p>HCV5. Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).</p> <p><i>For example, key hunting or foraging areas for communities living at subsistence level in a Cambodian lowland forest mosaic.</i></p>
<p>HCV6. Forest areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).</p> <p><i>For example, sacred burial grounds within a forest management area in Canada.</i></p>

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<sup>1</sup> FSC Principles and Criteria. Document 1.2; revised February 2000. Available from [www.fscoax.org](http://www.fscoax.org)

In summary, ***a High Conservation Value Forest is the area of forest required to maintain or enhance a High Conservation Value.*** A HCVF may be part of a larger forest, for example a riparian zone protecting a stream that is the sole supply of drinking water to a community or a patch of a rare limestone-loving forest within a larger forest area. In other cases, the HCVF may be the whole of a large forest management unit, for example when the forest contains several threatened or endangered species that range throughout the forest. Any forest type – boreal, temperate or tropical, logged or non-logged, natural or plantation can potentially be a HCVF, because HCVF designation relies solely on the presence of High Conservation Values within the forest.

### ***1.3. What is the Toolkit for?***

Although the FSC provides the generic definition of HCVs (Box 1.1), it is not easy to interpret this global definition in different forest types, locations and in different social circumstances. This Toolkit provides guidance on how to take the generic definition and develop specific, detailed and clear interpretations for a particular country or region. It also provides guidance to forest managers on how to work with the generic definition when no national definition is yet available.

This Toolkit is divided into three parts. The Introduction (Part 1) is intended for all users. Parts 2 and 3 of the Toolkit are similar to each other, but address the implementation of HCVF from two different perspectives: Part 2 is intended for groups that are developing national (or sub-national) definitions of HCVF, whereas Part 3 is aimed at forest managers who need to identify HCVF in the absence of such a national-level process. It is therefore intended that a Toolkit user will have to read *either* Part 2 *or* Part 3, but not both.

**Part 1: Introduction.** This gives a general introduction to the concept of HCVF and how different users can apply it.

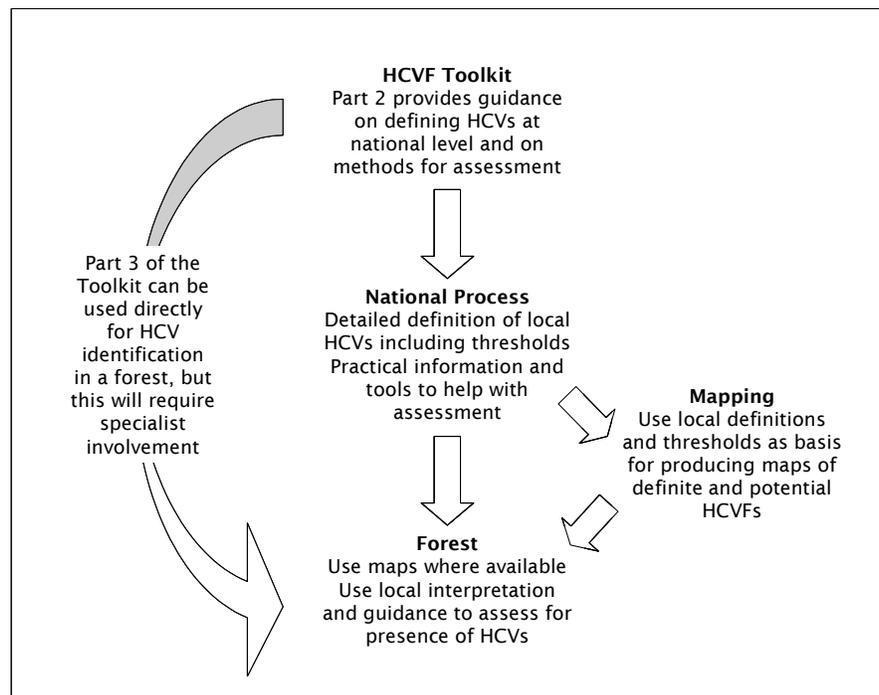
**Part 2: Defining High Conservation Value Forests at a national level.** The ideal way of implementing the concept is by developing national (or sub-national) interpretations that clearly define the local HCVs. This part of the Toolkit provides a practical methodology to be used at a national (or sub-national) level for defining High Conservation Values.

Developing national definitions requires both technical knowledge and difficult decisions about when an attribute is of sufficient importance to be designated a High Conservation Value. Therefore, input is needed from a range of technical specialists as well as different interest groups. The appropriate forum for defining national HCVs will vary, but could include a standards working group, a national group convened for HCVF or a group convened by a particular company. Whatever the composition of the group, the Toolkit maps out the steps involved in developing fair, workable definitions and guidelines.

This Toolkit provides a detailed framework on how to define each of the six types of High Conservation Value. This includes guidance on how to use different types of existing information to define HCVs for a country and outlines potential sources of this information. It also provides examples of how other groups have defined individual HCVs. The Toolkit then provides some guidance on designing appropriate requirements for managing and monitoring each type of High Conservation Value.

Once High Conservation Values have been defined nationally, the High Conservation Value Forest concept can be used by forest managers to meet standards related to High Conservation Value Forest, by certifiers assessing High Conservation Value Forest, by landscape planners trying to prioritise different land-uses and by purchasers, investors or donors implementing policies concerned with the concept of High Conservation Value Forest. This is illustrated in Figure 1.1.

**Figure 1.1. How the HCVF Toolkit is used to identify HCVs**



**Part 3: Identifying and Managing High Conservation Value Forests: a guide for forest managers.** This part of the Toolkit is aimed at forest managers, other land managers, investors, donors, and conservation practitioners who wish to implement HCVF as part of best management practice. Unfortunately, in many countries there is no clear and precise definition of HCVF (e.g., as part of a ratified FSC certification standard or even an FSC standards working group). This creates the problem that forest managers have to interpret generic terms such as ‘significant’ or ‘critical’ that are not easily

understood in the context of a specific forest. Part 3 provides guidance on identifying HCVF in the absence of an accepted national definition and also provides some general guidance as to what sort of management and monitoring activities are likely to be appropriate for each type of HCV.

#### ***1.4. How does the HCVF fit in with other initiatives?***

The identification of specific forest values and the use of that information in determining planning and management decisions is not a new approach. However, perhaps the most exciting feature of the concept of High Conservation Value Forest is that it is inclusive, and can provide a framework for applying the results of the many other important initiatives that seek to define key forest values.

There may be a number of different approaches and analyses of forest resources that are applicable in any specific location. For example, the results of global analyses of those forests that contain the greatest biodiversity, numbers of endemic species and loss of forest area (such as WWF Global 200 Ecoregions, Conservation International 'hotspots') all provide crucial information on the global significance of biodiversity within a region. Likewise, studies of customary land use or maps of indigenous areas might help define High Conservation Value Forests within a particular region. The HCVF approach enables the information from this range of sources to be integrated in an overarching process to define the High Conservation Values for a particular country or locality.

This means that a large proportion of the effort put into implementing HCVF involves identifying and using appropriate information. Parts 2 and 3 of the Toolkit provide a framework for identifying and using existing information to define HCVFs at a national or sub-national level (Part 2) or to assess whether a particular forest area contains any HCVs (Part 3). Guidance is also given on how to proceed when the existing information within a particular country is not suitable for defining or identifying HCVs.

#### ***1.5. Who can use the HCVF approach?***

The HCVF concept is useful in several ways to different user groups:

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

Forest managers can carry out evaluations of their forest areas to determine whether any of the defined HCVs are present within their FMU, so that they can integrate them into their overall forest management planning and activities. This is a requirement of FSC certification and may also be demanded by customers, donors or investors.

##### **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. When no

national standard exists, certification auditors will be required to develop 'interim standards' against which to assess forest management.

**c. Use by landscape planners trying to prioritise different land-uses**

Based on information that is already held or is being collated, 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 land-use planning decisions and conservation planning and land-use advocacy.

**d. Use by purchasers implementing precautionary purchasing policies**

Purchasers implementing HCVF policies can utilise landscape-level information about the presence of HCVs, or use the nationally defined sets of HCVs to also undertake evaluations for the presence of HCVs in specific FMUs, or in setting precautionary purchasing policies. Many purchasers and retailers have complex supply chains and so will normally need either maps of HCVFs or possibly clear guidelines (rather than maps or guidelines of areas that potentially contain HCVs) that are recognised by a wide range of stakeholders.

**e. Use by investors and donors**

Investors and donors are increasingly concerned to provide safeguards to ensure that investments or donations do not promote socially or environmentally irresponsible actions from potential recipients. This may take the form of either screening potential recipients or introducing requirements that the recipients fulfil their social and environmental responsibilities. By concentrating on the most critical environmental and social values, the HCVF framework provides a potential mechanism for ensuring that donors and investors fulfil their own environmental and social policies.

## ***1.6. How does HCVF affect forest management?***

Almost all standards for sustainable forest management contain requirements to protect important habitats for biodiversity, to assure that forest management does not degrade the watershed or erosion protection functions of forest and to ensure that forest users are treated in a fair and equitable way. The HCVF concept is based on the idea that, when a forest contains a value that is of outstanding significance or critical importance, there need to be extra safeguards to ensure that the value is not being degraded or otherwise negatively affected by management.

Designating a forest (or part of a forest) as HCVF does not automatically preclude management operations such as timber harvesting. However, it does mean that management activities must be planned and implemented in a way that ensures that the values are maintained or enhanced.

Under FSC certification, there are four requirements under Principle 9<sup>2</sup>, covering identification, consultation, management planning and monitoring of HCVFs (Box 1.2)

**Box 1.2 FSC Principle 9: the four criteria governing management of High Conservation Value Forests**

*Criterion 9.1 Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.*

The purpose of this criterion is to ensure that any outstanding or critical values (i.e., HCVs) that occur within a forest management unit are identified. This will entail the demarcation of the forest necessary to maintain and enhance the value (i.e., the HCVF) on operational planning maps.

*Criterion 9.2 The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.*

This criterion requires forest managers to consult with stakeholders on the options for the maintenance of any High Conservation Values that are identified. This requirement places a safeguard on the management of HCVFs as it allows stakeholders to raise significant and credible points that may be important in maintaining or enhancing the identified HCV.

*Criterion 9.3 The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.*

This criterion specifies the general goal of management of HCVF – to maintain or enhance the HCV – as well as ensuring that stakeholders are informed about the proposed management regime for the HCVF.

*Criterion 9.4 Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.*

Where values are of such importance that they have been designated as HCVs, there is clearly a need to ensure that the management of them is effectively maintaining them. Therefore, monitoring should be conducted to assess this.

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<sup>2</sup> FSC Principles and Criteria. Document 1.2; revised February 2000. Available from [www.fscoax.org](http://www.fscoax.org)

## 2. General introduction to the High Conservation Values

This section introduces each of the six High Conservation Values (HCVs) in turn. For two of the HCVs (HCV1 and HCV4), the Toolkit identifies several elements that need to be considered. This is summarised in the table below.

**Table 2.1. High Conservation Values and their elements**

HCV element
<b><i>HCV 1 Globally, regionally or nationally significant concentrations of biodiversity values</i></b>
<i>HCV1.1 Protected Areas</i>
<i>HCV1.2 Threatened and endangered species</i>
<i>HCV1.3 Endemic species</i>
<i>HCV1.4 Critical temporal use</i>
<b><i>HCV2 Globally, regionally or nationally significant large landscape level forests</i></b>
(No additional elements)
<b><i>HCV3. Forest areas that are in or contain rare, threatened or endangered ecosystems</i></b>
(No additional elements)
<b><i>HCV4. Forest areas that provide basic services of nature in critical situations</i></b>
<i>HCV4.1 Forests critical to water catchments</i>
<i>HCV4.2 Forests critical to erosion control</i>
<i>HCV4.3 Forests providing barriers to destructive fire</i>
<b><i>HCV5. Forest areas fundamental to meeting basic needs of local communities</i></b>
(No additional elements)
<b><i>HCV6. Forest areas critical to local communities' traditional cultural identity</i></b>
(No additional elements)

## ***2.1. HCV1: Globally, regionally or nationally significant concentrations of biodiversity values***

This value is intended to include areas with extraordinary concentrations of species, including threatened or endangered species, endemics, unusual assemblages of ecological or taxonomic groups and extraordinary seasonal concentrations.

Any forest that contains the species identified as HCVs, or which contains habitat critical to the continued survival of these species, will be a HCVF. This will include forests with many species that are threatened or endangered or many endemic species (e.g. “Biodiversity hotspots”). Exceptionally, it may even be that a single species is considered important enough to be an HCV on its own.

However, there will be many forests that contain rare or endemic species that are not HCVFs because there is not a **globally, regionally or nationally significant concentration**. These forests should still be managed appropriately, but they are not HCVFs.

Since there is a range of ways in which biodiversity values can be identified, this value has been sub-divided into four elements:

- **HCV1.1 Protected areas:** Protected areas perform many functions, including conserving biodiversity. Protected area networks are a cornerstone of the biodiversity conservation policies of most governments and many NGOs and the importance of them is recognised in the Convention on Biological Diversity (CBD). Although the processes of selecting areas for protection have varied greatly in different countries and at different times, many are nonetheless vital for conserving regional and global biodiversity values.
- **HCV1.2 Threatened and endangered species:** One of the most important aspects of biodiversity value is the presence of threatened or endangered species. Forests that contain populations of threatened or endangered species are clearly more important for maintaining biodiversity values than those that do not, simply because these species are more vulnerable to continued habitat loss, hunting, disease etc.
- **HCV1.3 Endemic species:** Endemic species are ones that are confined to a particular geographic area. When this area is restricted, then a species has particular importance for conservation. This is because restricted range increases the vulnerability of species to further loss of habitat etc, and at the same time the presence of concentrations of endemic species is proof of extraordinary evolutionary processes.
- **HCV1.4 Critical temporal use:** Many species use a variety of habitats at different times or at different stages in their life-history. These may be geographically distinct or may be different ecosystems or habitats within the same region. The use may be

seasonal or the habitat may be used only in extreme years, when, nevertheless, it is critical to the survival of the population. This component includes critical breeding sites, migration sites, migration routes or corridors (latitudinal as well as altitudinal) or forests that contain globally important seasonal concentrations of species. In temperal and boreal regions, these critical concentrations will often occur seasonally (e.g., winter feeding grounds or summer breeding sites), whereas in the tropics, the time of greatest use may depend more on the particular ecology of the species concerned (e.g., riverine forests within tropical dry forests may be seasonally critical habitat for many vertebrate species). This element is included to ensure the maintenance of important concentrations of species that use the forest only occasionally.

## ***2.2. HCV2. Globally, regionally or nationally significant large landscape level forests***

This part of the HCVF definition aims to identify those forests that contain viable populations of most if not all naturally occurring species. It often also includes forests that contain important sub-populations of very wide-ranging species (e.g. wolverine, tiger, elephant) even though the sub-populations may not in themselves be viable in the long term. It includes forests where ecological processes and ecosystem functioning (e.g. natural disturbance regimes, forest succession, species distributions and abundance) are wholly or relatively unaffected by recent anthropogenic activities. Such forests are necessarily large and will be less affected by recent human activities than other forests within the region. Where forest ecosystems naturally form a landscape-level mosaic with other vegetation types and where many species use both forest and non-forest ecosystems<sup>3</sup>, then it may be decided that this value relates to the mosaic of natural vegetation and not just the extent of forest.

Large landscape level forests are increasingly rare and continue to be threatened throughout the world, through processes such as deforestation, forest fragmentation and degradation. Nevertheless, the occurrence of large, natural forests differs greatly from country to country. In countries where there has been extensive forest conversion, there may be no forests that would be considered under this HCV. Alternatively, forests that are capable of maintaining most or all species may be so few that they are already well known. However, some countries retain a relatively large proportion of forest cover and in such cases the extent to which patterns of historical and current use as well as current threats have reduced the ability of forests to support the natural array of species will have to be assessed.

It is also worth emphasising that the forest considered under HCV2 is not necessarily confined to a particular administrative unit (e.g. forest management unit). This is because several contiguous administrative units of forest land may together form a significant large landscape level forest. An individual forest management unit can be a HCVF under HCV2 if it is whole or part of a significant large, landscape level forest.

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<sup>3</sup> For example, the Mosquitia region of eastern Nicaragua and Honduras is a natural mosaic of various vegetation types, including forests, grasslands and swamps. Many animal species utilise most or all of these vegetation types for different activities or at different times.

### **2.3. HCV3: Rare, threatened or endangered ecosystems**

Some ecosystems are naturally rare, where the climatic or geological conditions necessary for their development are limited in extent. Recent processes, such as land conversion, may have decreased their extent even further. Examples include montane forests in eastern Africa, cloud forests in Central America or riverine forests in semi-arid regions of Africa.

Other ecosystems have become rare through recent human activity, such as conversion of natural ecosystems into agricultural or other land use. It is often these ecosystems that are the most at risk in the future.

This value is designed to ensure that threatened or endangered forest ecosystems, communities or types are maintained. It includes forest types which were previously widespread or typical of large regions. They also include rare associations of species, even when the constituent species may be widespread and secure. These include:

- Associations (intact or not) that have always been rare (e.g. beach forests along the Philippine coast)
- Forests ecosystems, even if heavily disturbed or degraded, which are now rare or greatly reduced, and where intact examples are very rare (e.g. Atlantic forests (*mata atlantica*) of Brazil)

In these cases, the HCV is the rare ecosystem itself, which may be all or part of any particular forest. Native forest ecosystems or species assemblages that are characteristic of a region but are not rare or endangered should not be considered HCVFs under this part of the definition.

## ***2.4. HCV4: Forest areas providing basic services of nature in critical situations***

All forests provide some services of nature, such as watershed protection, stream flow regulation or erosion control. These services should always be maintained under good management, a fact reflected in the requirements of most forest management standards. The value can be considered an HCV if the consequence of a breakdown in these services would have a serious catastrophic or cumulative impact. For example, a forest that forms a large proportion of the catchment area of a river that has a high risk of damaging and destructive flooding downstream may be critical in preventing flooding and would be considered an HCVF. It is this type of situation that HCV4 attempts to identify.

Since there is a range of separate ecosystem services, this value has been sub-divided into three elements:

- **HCV4.1 Forests critical to water catchments:** Forests play an important role in preventing flooding, controlling stream flow regulation and water quality. Where a forest area constitutes a large proportion of a catchment, may be able to play a critical role in maintaining these functions. The greater the risk of flooding or drought or the greater the importance of water usage, the more likely it is that the forest is critical to maintaining these services and more likely that the forest is an HCVF.
- **HCV4.2 Forests critical to erosion control:** A second basic service of nature that forests provide is terrain stability, including control of erosion, landslides, avalanches and downstream sedimentation. All areas can potentially suffer some degree of erosion, but often the extent or risk of these is very low or the consequences minor. In some cases, though, forests protect against erosion, landslides and avalanches in areas where the consequences, in terms of loss of productive land, damage to ecosystems, property or loss of human life, are severe. In these cases, the ecosystem service provided by the forest is critical, and it is these that should be designated HCVFs.
- **HCV4.3 Forests providing barriers to destructive fire:** Fire is a part of the natural dynamics of many forest ecosystems, such as boreal forests in Canada or eucalypt forests in Australia. However, forest fires, whether started by natural causes or by humans, can sometimes develop into destructive, uncontrolled fire that can be a serious risk to human life and property, economic activity, or to threatened ecosystems or species. A HCV under this element includes forest that naturally acts as a barrier to fire in areas that are prone to fire where the consequences are potentially severe.

## ***2.5. HCV5: Forest areas fundamental to meeting basic needs of local communities***

The definition of HCVFs recognises that some forests are essential to human well-being. This value is designed to protect the basic subsistence and security of local communities that are dependant on forests - not only for "forest-dwelling" communities, but also for any communities that get substantial and irreplaceable amounts of income, food or other benefits from the forest.

Employment, income and products are values that should be conserved if possible, without prejudice to other values and benefits. However, management of HCVFs does not imply excessive and unsustainable extraction of resources, even when communities are currently economically dependent on the forest. Nor do they include the excessive application of traditional practices, when these are degrading or destroying the forests and the other values present in the forest.

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

The following would not be considered HCVFs:

- Forests providing resources that are useful but not fundamental to local communities.
- Forests that provide resources that could readily be obtained elsewhere or that could be replaced by substitutes.

HCV5 applies only to basic needs. For example, for a community that derives a large part its protein from hunting and fishing in forests where there is no alternative and acceptable source of meat or fish, the forests would constitute a HCVF. Another forest, where people hunted largely for recreational purposes (even if they did eat their catch) and where they were not dependent upon hunting, would not constitute a HCVF.

Over time, a value may grow or decline, with changing community needs and changes in land use. A forest, which was previously only one of many sources of supply, may become the only, or basic fundamental source of fuel wood or other needs. Conversely, needs may decline and disappear with time. For example, a forest that protected a stream that provided the only source of water for drinking and other daily needs to a community would cease to become a HCVF if a tube-well was constructed that provided water of sufficient quality and quantity for the community.

HCV5 is determined by *actual* reliance on the forest of communities (even when this reliance is only occasional, as in the case of forests providing food in times of famine), rather than a future or potential situation. For example, the government of a particular country may have a scheme to generate employment and income for rural communities.

If this is not implemented for all communities, or if some members of certain communities are unable or unwilling to take advantage of this and are consequently still dependant on forests for some of their basic needs, then a forest can still be an HCVF.

## ***2.6. HCV6: Forest areas critical to local communities' traditional cultural identity***

As well as being essential for subsistence and survival, forests can be critical to societies and communities for their cultural identity. This value is designed to protect the traditional culture of local communities where the forest is critical to their identity, thereby helping to maintain the cultural integrity of the community.

A forest may be designated a HCVF if it contains or provides values without which a local community would suffer an unacceptable cultural change and for which the community has no alternative. Examples of HCVF under this part of the definition would include:

- Sacred groves in India, Borneo and Ghana
- Forests used to procure feathers of the Argus Pheasant used by Dayak communities in Borneo in headdresses for important ceremonies.
- Forests in the Brazilian Amazon that are used by extractivist communities (such as rubber tappers) as the sole or main source of economic activity.

This should include both people living inside forest areas and those living adjacent to it as well as any group that regularly visits the forest. For example, the Maasai people of East Africa are mainly involved in herding cattle on the plains. However, they use forest as an integral part of their initiation rites and so should be considered in any discussion of forest use.

## Appendix 1: List of Reviewers of the HCVF Toolkit

This document has been through several phases of review and revision. In addition to the numerous people who have provided comments at various meetings, the following people have kindly provided reviews of earlier drafts of the document:

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