

HCVF for conservation practitioners

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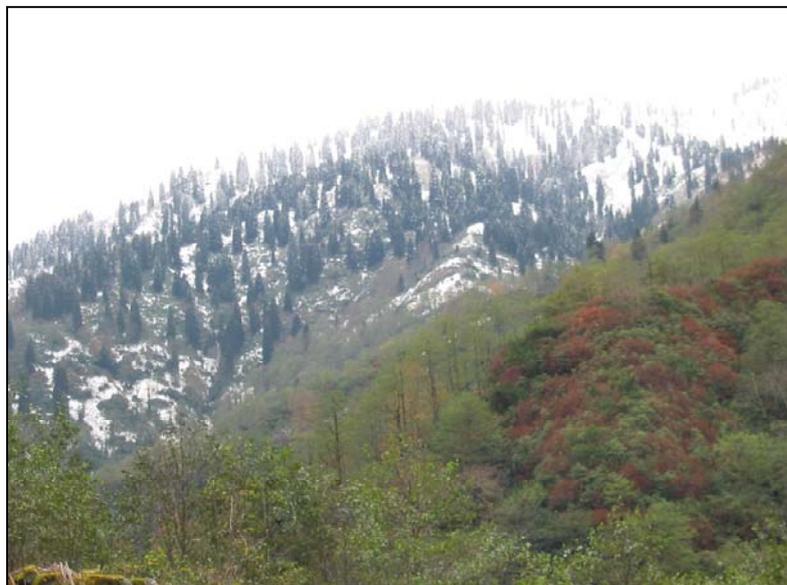
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1. Introduction

The concept of High Conservation Value Forests (HCVF) is an exciting recent development in conservation. It is rapidly gaining ground as an important component of sustainable forest management and is increasingly being used in other areas, such as conservation advocacy, responsible purchasing, investment and donor policies and conservation planning.

Many conservation practitioners remain unaware of what tools are available to help them implement HCVF projects and do not know about the many HCVF projects that have already been undertaken. At the same time, they are confronted by a plethora of different conservation tools and approaches and must be sure that any new approach can bring results that could not be achieved by methods with which they are already familiar.

This document is aimed at conservation practitioners. It introduces:

- The idea of HCVF;
- How HCVF fits in with other conservation initiatives and approaches;
- A decision tool for deciding whether to implement HCVF projects
- Links to practical tools for implementing HCVF and examples of where it has been done

1.1. What are High Conservation Value Forests?

Every forest has some environmental and social value. This 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.

The key to the concept of HCVF 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.

The HCVF concept was initially developed by the Forest Stewardship Council (FSC) for use in forest management certification and first published in 1999. Under Principle 9 of the FSC certification standard, 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.

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 definition of HCVs encompasses exceptional or

critical ecological attributes, ecosystem services and social functions. These definitions are listed in Box 1, with an example for each.

Box 1 The six types of High Conservation Value¹

HCV1. Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).

For example, the presence of several globally threatened bird species within a Kenyan montane forest².

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.

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.

HCV3. Forest areas that are in or contain rare, threatened or endangered ecosystems.

For example, patches of a regionally rare type of freshwater swamp forest in an Australian coastal district.

HCV4. Forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).

For example, forest on steep slopes with avalanche risk above a town in the European Alps.

HCV5. Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).

For example, key hunting or foraging areas for communities living at subsistence level in a Cambodian lowland forest mosaic.

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).

For example, sacred burial grounds within a forest management area in Canada.

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

¹ FSC Principles and Criteria. Document 1.2; revised February 2000. Available from www.fscoax.org

² The cover photograph shows part of the Firtina Valley in the North Eastern Black Sea region of Turkey. Well over 100 species of vascular plants endemic to the Caucasus ecoregion have been recorded from the valley. The forest also protects one of the most intact rivers in the region, which is an important spawning ground for many fish species. A High Conservation Value 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 un-logged, natural or plantation can potentially be a HCVF, because HCVF designation relies solely on the presence of High Conservation Values within the forest.

The rapid uptake of the concept reflects its elegance. It shifts 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.

1.3. What are the management implications of designating a forest as HCVF?

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.

There are three basic options available for managing HCVF:

- **Protection of the area**, through reserves, buffer zones, marking boundaries and control of activities that degrade the HCV (e.g. hunting of rare species). Where doubt exists as to whether any of the other management options are able to maintain or enhance the identified HCVs, then protection will be the preferred option.
- **Modifications or constraints on operations**, or specific operational prescriptions. Examples might include implementation of particular cutting cycles, retention of named species or maximizing notable habitat features such as areas suitable for nesting or feeding. The decision to adopt any particular operation must be made based on the precautionary approach (which means that management should be extremely cautious where doubt exists about whether a particular activity is adequate to maintain the HCV).
- **Restoration activities**, where the forest area requires some remedial action to restore regarded values, such as removal of alien species or enrichment of riparian functions.

1.4. Why use HCVF?

The HCVF approach provides exciting opportunities for conservation. It has been used both within the FSC system and more broadly. For example, the approach is

increasingly being used for mapping and in conservation advocacy and natural resource planning. It is also being used in purchasing policies and recently has begun to appear in discussions and policies of government agencies.

There are several reasons for this:

- *It provides a way of ensuring that the world's most outstanding or critical forests are adequately maintained* by sustainable forest management systems. Providing assistance to people who want to implement the concept is therefore a critical part of supporting sustainable forest management, especially FSC certification.
- *The concept is widely acknowledged within the timber industry.* As the concept derives from forest management standards it is becoming increasingly well known throughout all parts of the timber supply chain. Importantly, it is a concept that is applicable to all countries (although the details of exactly what an HCVF is will vary from country to country, depending on biological resources and social circumstances). This means that it is an effective communications tool that can be used to lever action on the ground. Timber retailers, manufacturers, suppliers (as well as donor and investment institutions) can all influence adoption of the HCVF approach by forest managers.
- *HCVF provides a means of integrating a range of conservation approaches into a unified whole.* 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. Conservation plans, studies or processes that identify forests of outstanding importance for biodiversity, environmental protection or for social and cultural values can be integrated in an over-arching process to define the High Conservation Values for a particular country or locality. At the same time, the HCVF approach has a strong emphasis on consultation and consensus, and so people and institutions can also be brought together through the process. The strong emphasis on consultation also means that decision makers can be reassured the HCVF approach will have a wide degree of support from different sectors of society.
- *HCVF is consistent with many existing policies.* These include the purchasing policies of individual companies (e.g. IKEA), the new World Bank forest policy and the commitment of EU countries with respect to protected areas (Natura 2000).

There is an ever-growing number of examples of how the concept has been used to achieve real conservation benefits, one of which is given in Box 2.

Box 2 Gaining new protected areas and better forest management in Canada

Canada has one of the largest areas of forest of any country. Expanses of of intact forest landscapes remain, as well as habitat for endangered species and areas that are used by, and have cultural significance for, First Nations people. At the same time, many environmental groups are concerned that forest management is often degrading these values and that the protected areas network is insufficient to maintain the country's biological heritage in the long term.

WWF Canada has formed partnerships with several of corporate timber producers and First Nations groups. The forests included in these partnerships range from coastal forest in British Columbia through to the boreal region. Some of the forest managers are committed to achieving FSC certification and have asked that WWF Canada assist them in delineating HCVF within their timber concessions. Assessment for the presence of HCVF is currently being conducted in a total of 30 million hectares of forest.

In some of the other partnerships, the forest managers do not at present want to commit to FSC certification but still believe that identifying and appropriately managing HCVF is an important part of responsible forest management. These forests include a further 20 million hectares.

In most cases so far, forest managers have decided that a portion of HCVFs should be set aside from timber production to contribute to a complete and viable core reserve network. These companies are now helping to lobby the relevant government authorities to have these HCVFs gazetted as protected areas. Using the HCVF both within and outside the context of FSC certification is therefore providing a mechanism to both improve forest management and increase the number of protected areas in Canada.

1.5. Who decides what High Conservation Values are?

Within forest certification, the FSC governs how HCVs are defined for a particular country or forest type; the responsibilities of individual forest managers identifying HCVF on the ground; and the requirements for consultation and management.

When the HCVF approach is being used outside FSC certification, these issues are less clear. One thing we can say, though, is that the interpretation of HCVF used should always consistent with any FSC ratified national (or sub-national) definition. This will avoid the potentially confusing situation of different people and organisations using the term 'HCVF' to mean different things.

Where no such definition exists, then it is important that a wide range of people and institutions are consulted as part of any HCVF project³. There are two basic reasons for this:

- The more multi-stakeholder, consensus-based the process, the more likely it is that the results will have buy-in, acceptance and credibility.
- HCVF work involves a wide range of expertise – from biology to social science, from forest management to GIS – and input from a range of experts will be necessary.

³ These issues are considered in further detail in '*The HCVF Toolkit. Part 2: Defining High Conservation Values at a national level: a practical guide*'. ProForest 2004. Available from www.proforest.net

1.6. How does HCVF fit in with other conservation tools?

Most conservationists agree that a proportion of the world's forests will have to be managed for production. HCVF was originally seen as a mechanism for ensuring that important values were adequately maintained in managed forests. This is still true, and remains its main use, but HCVF has also been used in several countries as a way of increasing the number of protected areas, often initially through the voluntary action of forest managers with legal protected status sometimes following (e.g. Russia; Canada – see Box 2). Likewise, although HCVF is not specifically aimed at ecosystem restoration, it has sometimes stimulated forest restoration activities, particularly where the 'best' forests are somewhat degraded (e.g. United Kingdom; Kingabatangan, Malaysia).

Although HCVF is a relatively new approach in conservation, it is not meant to exclude other approaches. In fact, the methods used and values identified by an HCVF approach will be consistent with other conservation planning systems and may differ only in terms of thresholds, scale, detail and target audience, etc. On the contrary, HCVF can often be a means of implementing on the ground a wealth of existing knowledge, information and conservation planning and assessment tools (Box 3). In addition, an HCVF process requires a wide range of consultation and input on biodiversity, ecosystem services and social issues, which allows for wide acceptance of the outcomes of a project.

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, zonation of forests into different categories of importance for watershed protection, 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 over-arching process to define the High Conservation Values for a particular country or locality.

Box 3 Using existing information and tools to identify HCVFs

HCV2 (globally, regionally or nationally significant large, landscape forests) can be identified using the results of existing conservation assessments. Where no such assessments have been undertaken, this HCV can be identified by applying such conservation planning tools to data sources that are already available. The following lists provide some examples of tools and information sources relevant to this HCV:

Conservation tools: Global Forest Watch 'Intact Forest Landscapes'; WWF Ecoregional vision workshop; WCS 'Landscape species indicators'; TNC 'Five-S Framework'; TNC 'Functional landscapes' TNC 'Population Viability analysis'; WWF-IUCN 'Forest Quality Assessment'

Information sources: Satellite imagery, land designation maps, forest cover and vegetation maps

It should be emphasised that HCVF is less likely to result in a comprehensive conservation plan than some other conservation tools. For example, WWF Ecoregion vision workshops provide a conservation analysis that is more comprehensive than that provided by the HCVF approach, because, for example, they take into account freshwater and non-forest terrestrial ecosystems that are not covered by HCVF. However, where such a comprehensive conservation plan already exists, HCVF can provide a means of *implementing* this wider conservation vision in forest lands.

HCVF can therefore be a very useful tool for the conservation practitioner, either where forests are the overwhelming focus of conservation, to implement existing conservation plans or to integrate a range of conservation assessments.

Since many perfectly good conservation tools already exist, the question becomes 'why should I use HCVF rather than some other conservation approach?' This is the subject of the Section 2.

2. Deciding when and how to use HCVF

This section is aimed at helping you decide whether HCVF will be a useful conservation approach in your country or area. It provides:

- a decision tool to decide whether HCVF is likely to be a priority conservation activity within a particular country or area
- discussion of when HCVF is likely to provide advantages over other conservation approaches
- a sketch of what HCVF projects can potentially achieve.

2.1. Deciding whether HCVF is appropriate

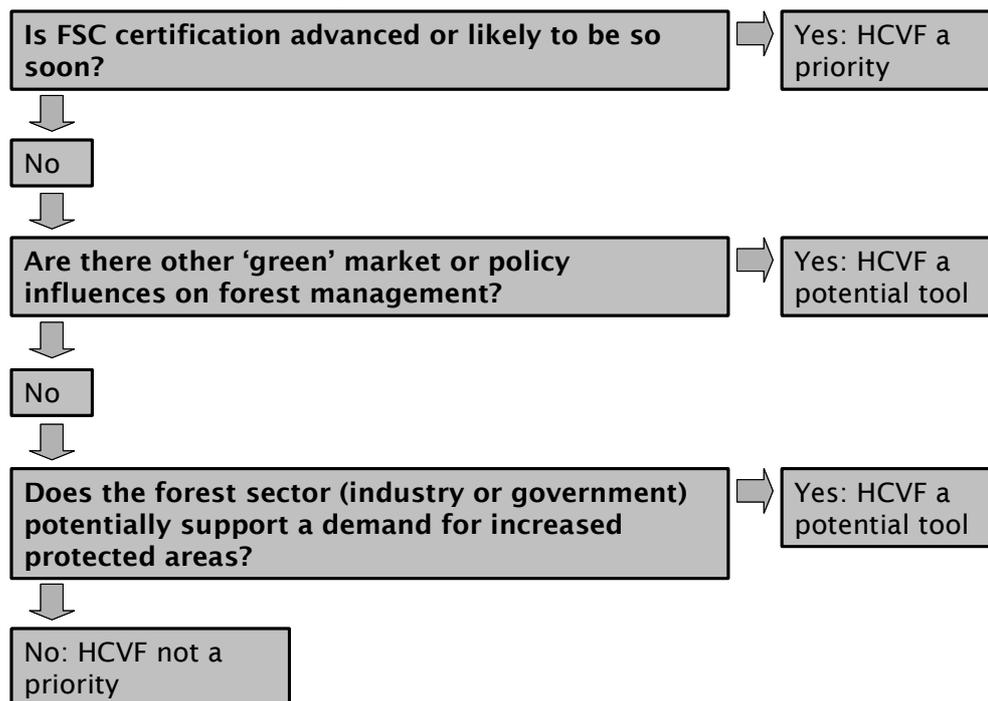
There are three main situations where it may be appropriate use the HCVF approach:

- *Where FSC certification is advanced or likely to be so soon.* Includes where the FSC national standards writing process is underway or likely to begin soon; where a large area of forest is already certified; or where interest in FSC certification is growing amongst forest managers.
- *Where there are other 'green' market or policy influences on forest management.* Even in the absence of active FSC processes, there may be an opportunity to define and develop management prescriptions for HCVF. In fact, because HCVF is an internationally applicable term, it has often proved an effective 'ice-breaker' that has made it easier for conservation groups to engage forest companies on conservation issues. Relevant market or policy influences include countries where forests are largely state controlled (i.e., the state either owns and manages the majority of forests within the country, or owns most forest and has strict and enforced regulations governing harvesting concessions), this would include situations when forestry regulations are being updated or where there is a strong history of national forest inventory. Where forests are largely privately controlled, this would include where there are government policies to encourage sustainable forest management, existence of GFTN groups, or where companies responsible for conversion or unsustainable harvesting are dependant on exports or foreign investments.
- *Where the forest sector (industry or government) could potentially support policy- or NGO-led demands for increased Protected Areas.* In many countries there is a demand for an increase in the number of protected areas. Numerous conservation tools are already available for selecting new protected areas, however, HCVF can be a critical tool for securing additions to the protected area network in some regions. So far, HCVF has proved effective in countries where forest management units are large, where the state has some control over forest resources (e.g., is able to offer alternative concessions), where there is a degree of support for conservation from either the forest sector (often a result of NGO campaigns or pressure from timber purchasers) or the state, and where forestry

has been identified as a major threat to biodiversity. The emphasis on consultation as part of the HCVF approach can also be an attractive feature for decision makers, because it increases the chances that candidate protected areas are supported by different sectors of society.

These three situations have been organised into a simple decision tree to help you decide whether HCVF is likely to be an appropriate approach in your country, landscape or region. If the answer to any of the questions is 'yes', then the next stage will be to decide whether HCVF is the best conservation approach (Section 2.2).

A decision tool for using HCVF in conservation



2.2. Is HCVF the best approach?

Having decided that the HCVF approach *may* be appropriate in a given conservation situation, the next question to ask is whether it is the *best* approach, i.e. whether it will help to provide conservation gains that other approaches could not. The answer inevitably requires a degree of judgement, but there are a number of factors that should be considered.

Where supporting FSC certification is a priority, *then HCVF will always be necessary*. HCVF forms Principle 9 of the FSC Principles and Criteria and so is integral to FSC certification. Depending on the status of FSC within the country, this may involve collaborating in defining HCVF as part of the national standards writing process, mapping HCVF or helping individual forest owners identify, delineate, manage and monitor HCVF.

The situations when there are other 'green' market or policy influences on the forest sector or when the forest sector can play a role in the creation of new protected areas are similar in that they both rely on government, the forest sector, or both being susceptible to the concept of HCVF. This will often be the result of NGO campaigns, pressure from timber purchasers or a political desire to improve forest management. The difference between the two situations lies more in the intended conservation outcome (improved forest management versus more protected areas). In either case, the likelihood that HCVF will be the best approach will be increased if:

- Forestry is one of the major land-uses within the country or region.
- The country or region is known to contain some exceptional values to which the forest sector is considered a major threat, for example,
 - If the area is a Global 200 Ecoregion or biodiversity 'hotspot'. In this case, rapid mapping of HCVs1-3 will be a priority action,
 - Large areas of forest remain mostly unaffected by human activities. In this case, rapid mapping of large landscape level forests (HCV2) will be a priority action,
 - Where many people are dependant on forests for their livelihoods or, conversely, where subsistence is a major threat to forest. Developing and implementing consultation mechanisms to secure HCV5&6 will be a priority action;
- Poor forestry is a major threat to these values;
- Other conservation initiatives have had little influence with the forest sector, and particularly when experience has shown that a consultative, collaborative approach (that is fundamental to HCVF) is likely to be productive. In addition, HCVF may be an important approach for implementing on the ground a wider conservation plan (e.g., an ecoregion vision plan).

2.3. What can I achieve through an HCVF project?

Numerous HCVF projects are already underway (see Section 3). These have so far concentrated on two broad areas: supporting sustainable forest management and influencing land-use planning. Under each of these broad headings, different projects have had different aims, and these are summarised below. For each, one or more examples are given; further details of these and other HCVF and HCVF-related projects are presented in Section 3.

- *Supporting sustainable forest management.* The conservation aims of these projects include:
 - Supporting FSC certification through helping to define HCVF as part of the national/sub-national standards writing process (e.g., Romania);
 - Defining HCVF on a national/sub-national scale in the absence of an FSC standards process, to assist both forest managers and responsible timber purchasers (e.g., Indonesia);

- Direct assistance to individual forest managers wishing to improve the management of their forests (e.g., HCVF monitoring protocols in Nicaragua, site-level projects in Canada, HCVF mapping in Russia’s Far East, site level projects in Malaysia);
- Supporting responsible timber purchasing through mapping HCVF (e.g., N.E. China).
- *Influencing land-use planning.* The aims of these projects include:
 - Securing new protected areas through voluntary set-aside; lobbying government departments to remove such areas from the productive land-base of concessions; providing alternative forest lands to forestry companies and grant legal protection to the HCVF areas (e.g., the Komi Republic of Russia, site-level projects in Canada);
 - Using HCVF analysis as an advocacy tool to influence land-use planning by plantation companies (e.g., pulp wood plantations, oil palm) and so preventing conversion of HCVF to other land-uses (e.g., projects in Riau Province of Indonesia; the MOSAIC project in Vietnam);
 - Incorporating HCVF into Environmental Impact Assessments (e.g., pilot study in Vietnam).

3. Sources of information for HCVF projects

If you have decided that HCVF may be a useful conservation approach, then the next step is to find out more information. This section provides:

- A list of available HCVF tools. These are tools that have been designed specifically for the HCVF approach, each covering different aspects of implementation of the concept. One or more of these is likely to underpin any HCVF work that you undertake.
- A table of ongoing HCVF projects. It is strongly recommended that anyone wishing to start HCVF work makes themselves familiar with one or more existing HCVF project *before* starting a new one.
- A summary of how existing information sources and conservation tools relate to each of the HCVs. This is intended to give you a feel for how you can use existing approaches in HCVF projects.

3.1. HCVF Tools

Tool	Description	Contact details
The HCVF Toolkit	Contains three parts: Part I: An Introduction to HCVF Part II: Defining High Conservation Values at a national level: a practical guide Part III: Identifying and managing High Conservation Values Forests: a guide for forest managers	info@proforest.net
Biological monitoring for forest management in High Conservation Value Forests	A guide for certifiers and forest managers, with emphasis on community management operations in natural forests in Central America	sgretzin@wwfca.org
A Sourcebook for Landscape Analysis of High Conservation Value Forests	Outlines the process that can be followed to undertake a landscape-level HCVF analysis and implement the results.	info@proforest.net

3.2. Practical examples of HCVF projects

Location	Scale	Description	Contact details
<i>Europe</i>			
Russia	Sub-national	Mapping HCVF in the Russian Far East and incorporating HCVF into forest inventory and management.	WWF Russia Far East Branch (Dennis Smirnov: dsmirnov@wwfrfe.ru)
Russia	Sub-national	Defining HCVF for the Arkhangelsk region, pilot mapping of HCVF	WWF Russia (Ekaterina Chernenkova: echernenkova@wwf.ru)
Russia	Sub-national	Identification, mapping, incorporation into inventory, forestry regulations and land-use planning of 'pristine' forests in Komi	Silver Taiga Foundation: office@komimodelforest.ru
Russia	National	Mapping 'Intact Forest Landscapes', joint action of NGOs to secure identified areas	Global Forest Watch (Alexey Yaroehneko: alexey@greenpeace.ru)
Baltics	Regional	Mapping old growth forests in Estonia, Latvia and Lithuania (precautionary mapping of HCV1)	www.balticforestmapping.net
Finland	Sub-national	Collaborative, consultative process to identify which old growth forests contain HCVs in several parts of the country (HCV 1 only)	WWF Finland (Harri Karjalainen: harri.karjalainen@wwf.fi)
Romania	National	Defining HCVFs for Romania, with the aim of incorporating this into the FSC national standard and forestry technical norms and mapping	WWF DCP (Maria Mihu: tudormihu@xnet.ro)
Bulgaria	National	Defining HCVFs for Bulgaria	WWF DCP (Zhivko Bogdanov: zhbogdanov@internet-bg.net)
Georgia	Sub-national	'Ecological carcass mapping': mapping areas of high biodiversity value (HVC1) and critical to ecosystem services (HVC4) in Georgia landscape-ecological carcass mapping' (WB Forests Development Project)	World Bank (ndrey Kushlin: Akushlin@worldbank.org)
Turkey & Georgia	Sub-national	Interpretation of HCVF and pilot mapping in the Southern Caucasus	WWF Turkey (Sedat Khalem: skalem@wwf.org.tr)
<i>Canada</i>			
Canada	National	Mapping 'Intact Forest Landscapes'	Global Forest Watch Canada

Location	Scale	Description	Contact details
		(conservation prescription to be decided?)	(Peter Lee: borealforest@powersurfr.com)
Canada	Various sites	Developing HCVF identification and management prescriptions with various forest management companies (currently covering over 50 million hectares).	WWF Canada (Tony Iacobelli: tiacobelli@wwfcanada.org)
<i>Central America</i>			
Nicaragua	Sub-national	Development of definition of HCVF for the North Atlantic Autonomous Region (RAAN) of Nicaragua	WWF Central America Regional PO (Steve Gretzinger: sgretzin@wwfca.org)
Nicaragua	Site	FMU field-testing the 'Monitoring biological HCVFs protocol'	CATIE (Bryan Finegan: bfinegan@catie.ac.cr)
Guatemala	Site	Identification of HCVs in a community managed FMU in the Peten region	Fundación Naturaleza para la Vida (NPV) (Julio Morales: jmoralesc@intelnet.net.gt)
<i>Asia</i>			
China	Sub-national	Defining and mapping HCVF in NE China	WWF China (Dr. Zhu Chunquan: chqzhu@wwfchina.org)
Indonesia	National	Defining HCVF for Indonesia	SmartWood Program (Jeff Hayward: jhayward@smartwood.org)
Indonesia	Sub-national	Provisional analysis of HCVs in Riau Province, Sumatra	WWF Indonesia (Nazir Foead: nfoead@indo.net.id)
Indonesia	Site	Identification of HCVs, demarcation of HCVF and negotiation with land managers in Giam Siak Kecil landscape, Riau Province, Sumatra	WWF Indonesia (Nazir Foead: nfoead@indo.net.id)
Indonesia	Sub-national	Identification of HCVF and collaboration with forest managers to ensure appropriate management in East Kalimantan	TNC (Scott Stanley: sstanley@smd.mega.net.id)
Indonesia	Sub-national	Tesso Nilo and forests nearby - identifying HCVFs as basis for negotiations over corridors, land-swaps with pulp companies etc	WWF Indonesia (Purwo Susanto: psusanto@wwf.or.id)
Indonesia	Sub-national	Sorong, Lorentz, Trans-Fly identifying HCVFs in priority ecoregions (West Papua)	WWF Indonesia (Ketut Deddy)
PNG	National	Investigating scope for national	WWF Papua New Guinea

Location	Scale	Description	Contact details
		process to identify HCVFs.	Country Office (Sander van den Ende: svdende@wwfpacific.org.pg)
PNG	Sub-national	Trans Fly - identifying HCVFs in a priority ecoregion.	WWF Papua New Guinea Country Office (Sander van den Ende: svdende@wwfpacific.org.pg)
Vietnam	Sub-national	MOSAIC - supporting land-use planning for conservation at province level	WWF Vietnam MOSAIC Project (Barney Long: mosaic@dng.vnn.vn)
Vietnam	Sub-national	Inform + Seco/EIA - pilot study incorporating HCVF into EIA procedures for state forestry enterprises	WWF Vietnam (Dr. Nghia Bien Nguyen: biennguyen@hn.vnn.vn)
Malaysia	National	FSC National Process/Toolkit	WWF-Malaysia (Ginny Ng: gng@wwf.org.my)
Malaysia	Sub-national	Lower Kinabatangan - mapping HCVFs for advocacy	WWF-Malaysia (Andrew Ng: ANg@wwf.org.my)
Malaysia	Sub-national	Upper Kinabatangan - mapping HCVFs for advocacy	WWF-Malaysia (Andrew Ng: ANg@wwf.org.my)
Malaysia	Site	Chellam Plantations - pilot form incorporating HCVFs into planning process for new oil palm plantations	WWF-Malaysia (Andrew Ng: ANg@wwf.org.my)
Malaysia	Site	Bornian Timber - FMU considering FSC certification	WWF-Malaysia (Ginny Ng: gng@wwf.org.my)
Malaysia	Site	PITC - FSC certified FMU which includes HCVF	WWF-Malaysia (Ginny Ng: gng@wwf.org.my)
Malaysia	Site	Deramakot - FSC-certified FMU which includes HCVF	WWF-Malaysia (Ginny Ng: gng@wwf.org.my)

3.3. Data sources and conservation tools that relate to HCVF⁴

As mentioned in Section 1.5, one of the strengths of the HCVF approach is that it builds on existing information and approaches and allows previous work to be integrated into an over-arching definition of the most important forests within a given area. The following two tables list a number of internationally available data sources that can inform HCVF projects, and existing conservation approaches that relate to HCVF respectively. Neither table is meant to be exhaustive, rather, they indicate the range of information and approaches that are available to the conservation practitioner.

Selected internationally available data sources for HCVF Analysis

The following table includes data and information that can inform HCVF projects. These all cover several countries (or are globally data sets). The table indicates which HCVs are covered, as well as a brief description of the data and contact details. There will, of course, be many local sources of information for each of the High Conservation Values, including national legislation, land zonation schemes, biological and social surveys, etc.

HCV covered	Data	Description	Source and Contact
HCV1 & 3	WWF Global 200 ecoregions	Globally important ecoregions defined on the basis of species richness; endemism; higher taxonomic uniqueness; extraordinary ecological or evolutionary phenomena and global rarity of the major habitat type.	http://www.panda.org http://www.worldwildlife.org http://www.nationalgeographic.com/wildworld
HCV1 & 3	CI 'hotspots'	Conservation International 'hotspots' are areas that contain outstanding levels of endemism and that have suffered high levels of habitat loss.	http://www.conservation.org http://www.biodiversityhotspots.org
HCV1	Centres of plant diversity	Some of the most important sites for plants worldwide.	http://www.iucn.org http://www.nmnh.si.edu

⁴ The tools and information sources listed here are ones that relate to specific High Conservation Values. Other conservation tools will also be invaluable, and it is particularly recommended that any HCVF project is carefully planned, including situation analysis, stakeholder engagement, etc. Invaluable planning frameworks for conservation projects can be found in, for example, 'Ecoregion Action Programmes: a guide for practitioners' (available from Bronwen Fyfe-Golder, fyfe-golder@xtra.co.nz); 'Guidelines for the Development of a Landscape Approach to Forest Conservation' Stewart Maginnis, William Jackson and Nigel Dudley [editors] (forthcoming), IUCN and WWF Gland (available from equilibrium@compuserve.com).

HCV covered	Data	Description	Source and Contact
HCV1	Endemic Bird Areas	A detailed account of the world's 218 Endemic Bird Areas (EBAs) - priority sites for bird and general biodiversity conservation.	Alison J. Stattersfield, Michael J. Crosby, Adrian J. Long and David C. Wege (1998). <i>Endemic Bird Areas of the World</i> . BirdLife International. http://www.birdlife.net
HCV1	Important Bird Areas	Maps and lists of Important Bird Areas. Current level of coverage varies between regions and in countries within regions.	http://www.birdlife.net
HCV1	Important Plant Areas	Important Plant Areas are natural or semi-natural sites exhibiting exceptional botanical richness and/or supporting an outstanding assemblage of rare, threatened and/or endemic plant species and/or vegetation of high botanical value. Geographical coverage limited at present.	http://www.plantlife.org.uk
HCV1	CITES	Species covered by CITES	http://www.cites.org
HCV1	IUCN Red Lists of Threatened Species	Threatened species listed by category of threat.	http://www.iucn.org
HCV1 & 3	NatureServe	NatureServe provide searchable databases and other information on species and ecosystem distribution in North America and distribution of birds and mammals in Latin America	N. America: www.natureserve.org Latin America: www.infonatura.org
HCV2	Global Forest Watch	Intact Forests Landscapes defined as roadless areas of forest > 50,000 ha	http://www.globalforestwatch.org
HCV2	TRFIC	The Tropical Rain Forest Information Centre (TRFIC) provide forest cover maps for many areas of the tropics	http://www.bsrsi.msu.edu/trfic

Tools for HCVF Analysis

Sometimes HCVF projects will require novel approaches and analysis. However, where conservation assessment tools have already been applied to the country or area, the results can be taken and ‘re-packaged’ as HCVF to allow the results to be implemented. Alternatively, the listed tools can be recommended to provide information necessary to implement HCVF projects if the knowledge required to define and delineate HCVFs is not yet available. The table indicates which HCVs are covered, as well as a brief description of the tool and contact details.

HCV covered	Toolkit	Description	Source and Contact
HCV1 & 3	WWF gap analysis	System for identifying gaps in protected area networks, using a land classification system based on enduring features (landforms) as a coarse surrogate for species distributions.	Kevin Kavanagh, Tony Iacobelli and Stan Rowe (1994); <i>A Protected Areas Gap Analysis Methodology</i> , WWF Canada. tiacobelli@wwfcanada.org http://www.wwfcanada.org
HCV1	Threats analysis	Threat analysis methodology developed to help identify key issues during ecoregion surveys	Jason.Clay@wwfus.org http://www.worldwildlife.org
HCV1 & 2	Systematic Conservation Planning	Data driven, 9-stage process to identify conservation sites: scoping, stakeholders, goals, data, targets, reviewing existing protected areas, selecting additional areas, implementation, M&E Portions	Bob Pressey; <i>Systematic Conservation Planning. Draft in preparation.</i> bpressey@ozemail.com.au
HCV1 & 2	Ecoregional vision workshop	Generic explanation of ecoregion conservation, including various assessment methodologies including explanation of the experts’ workshop to provide an overview of biodiversity importance and to identify priority conservation areas and targets	Eric Dinerstein et al (2000); <i>A Workbook for Conducting Biological Assessments and Developing Biodiversity Visions for Ecoregion-Based Conservation</i> , WWF US. http://www.worldwildlife.org
HCV1 & 2	Landscape species indicators	Developed by the Wildlife Conservation Society for planning through use of ecologically functioning populations of a suite of landscape species Part of the Living Landscapes.	Eric Sanderson, Wildlife Conservation Society. http://wcs.org
HCV1 – 3	The Five-S Framework System	Developed by The Nature Conservancy for planning and target setting, based around five elements: systems, stresses, sources, conservation strategies and measures of success.	Anon (2000); <i>The Five-S Framework for Site Conservation</i> , [2 volumes], The Nature Conservancy, Washington DC http://nature.org

HCV covered	Toolkit	Description	Source and Contact
HCV1 – 3	Functional landscapes concept	Methodology that complements that 5-S framework (see above) by providing a guide for the scale of intervention at any particular location	Karen Poiani and Brian Richter (no date); <i>Functional landscapes and the conservation of biodiversity</i> , TNC http://nature.org
HCV1	Rapid Ecological Assessment	Methodology for rapid assessment of biodiversity at ecoregion level.	Gina Sedaghatkish (1999); <i>Rapid Ecological Assessment Sourcebook</i> TNC; Roger Sayre et al (2000); <i>Nature in Focus: Rapid ecological assessment</i> , TNC and Island Press. Jeff Parrish: jparrish@tnc.org http://nature.org
HCV1 & 2	Population viability analysis	Methodology for assessing the viability of populations of species within protected area systems and elsewhere.	Morris, William et al (1999); <i>A Practical Handbook for Population Viability Analysis</i> , TNC http://nature.org
HCV1	The Bio-Rap Assessment method	Methodology developed for the World Bank.	Nix, H A et al (2000); <i>The BioRap Toolbox: A National study of biodiversity assessment and planning for Papua New Guinea</i> , Report to the World Bank
HCV1, 2, 4, 5, 6	Forest quality assessment	Landscape-level assessment of forest quality based around indicators divided into three sets of criteria: authenticity, environmental benefits and social and economic benefits. Can be either expert-driven or participatory and can be either a status or trends report	<i>Manual on Forest Quality Assessment</i> , WWF and IUCN, forthcoming Contact: Nigel Dudley: equilibrium@compuserve.com
HCV1 –3 & 5 – 6	The Landscape Approach	An assessment and negotiation approach based around a 7 stage process: target setting, stakeholder analysis, identification of landscape(s), assessment of performance and potential of landscape, reconciliation of different needs, implementation and M&E	Stewart Maginnis, William Jackson and Nigel Dudley [editors] (forthcoming): <i>Guidelines for the Development of a Landscape Approach to Forest Conservation</i> , IUCN and WWF, Gland equilibrium@compuserve.com
HCV3	Representing ecological communities in ecoregion conservation plans	Guidelines developed by The Nature Conservancy Applied widely in the USA	Mark Anderson et al (1999); <i>Guidelines for Representing Ecological Communities in Ecoregion Conservation Plans</i> , TNC http://nature.org

HCV covered	Toolkit	Description	Source and Contact
HCV5 & 6	Rapid Rural Appraisal	Widely-used system for working with rural communities to obtain a relatively rapid overview of their needs, desires and priorities	Messerschmidt, Donald A (1995); <i>Rapid Appraisal for Community Forestry</i> , IIED, London. http://www.iied.org
HCV5 & 6	Participatory Forest Assessment	Detailed book with many case studies outlining methods and experience relating to working with local communities in assessment of their forest resources	Carter, Jane (1996); <i>Current Approaches to Participatory Forest Resource Assessment</i> , Overseas Development Institute, London. http://www.odi.org.uk
HCV5	Resource assessment of non-wood forest products	Methods and principles for assessing non-wood products in forests	Jennifer Wong, Kirsti Thornber and Nell Baker (2001); <i>Resource assessment of non-wood forest products: experience and biometric principles</i> , FAO, Rome. http://www.odi.org.uk
HCV5	Integration of nutritional concerns into forest management	Guidelines for working with local communities to identify their major nutritional needs and to plan how these can be incorporated as much as possible within forestry projects	Ogden, Cynthia L (1991); <i>Guidelines for Integrating Nutrition Concerns into Forestry Projects</i> , Community Forestry Field Manual FAO, Rome. http://www.odi.org.uk