

Non-Timber Forest Products (NTFPs): Clearing the Confusion in Semantics

Albert Ahenkan¹ and Emmanuel Boon²

Human Ecology Department, Vrije Universiteit Brussel, Belgium
E-mail: ¹<aahenkan@vub.ac.be>, ²<eboon@vub.ac.be>

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ABSTRACT Though a significant volume of information has been documented on the importance and potential of NTFPs' utilisation and its impacts on poverty reduction, livelihoods improvement and environmental sustainability, a lot of confusion is still associated with NTFPs semantics and terminologies. NTFPs have proved to be difficult to clearly define because of the blurred boundaries between timber and non-timber products and the underlying difficulty in defining a forest. The overabundance of terminologies relating to a single term having a range of interpretations, and none of which is universally recognised is at the heart of the NTFPs semantic confusion. Consequently, the meaning of "NTFPs" has generated a lot of controversy. In other words, there is no universally accepted operational definition of NTFPs. Various definitions proposed in literature tend to expound on specific species, aspects and products according to different authors' focal interests. The increasing realisation of the importance of all forest resources makes the dichotomisation of forest resources into "timber" and "non-timber" overly simplistic. The lack of a common definition, terminologies as well as the multiplicity of interest, constitutes a real hindrance to research on and development of NTFPs. Through an extensive and critical review of literature and consultations with experts, this paper examines the semantics and the difficulties in defining NTFPs, the ensuing confusion and the consequences for research, and development and promotion of these products.

1. INTRODUCTION

The past decade has witnessed a *rapid growth of interest in non-timber forest products (NTFPs)* among conservation and development organisations (Arnold and Ruiz Pérez 1998; Wollenberg and Ingles 1998; Neumann and Hirsch 2000; Marshall et al. 2003). There are a number of reasons for the general spread and upsurge in global interest in NTFPs. It is believed that the promotion of sustainable use of NTFPs could lead to a *win-win situation for poverty reduction and bio-diversity conservation* (FAO 1995; Shiva and Verma 2002; Golam et al. 2008). This is due to the increasing recognition that NTFPs can contribute significantly to the livelihoods of forest dependent communities (Clendon 2001; Belcher et al. 2005; Marshall et al. 2005; Ros-Tonen and Wiersum 2005; FAO 2006; Ahenkan and Boon 2010); household food security and nutrition (FAO 1995; Falconer 1997; Clark and Sunderland 2004; Shackleton and Shackleton 2004; Ahenkan and Boon 2008); generate additional employment and income (Peters 1996; Ros-tonen 1999; Andel 2000; Marshall et al. 2003); and offer opportunities for NTFP based enterprises (Shackleton and Shackleton 2004; Subedi 2006). Moreover, NTFPs are more accessible to the poor (Saxena 2003); contribute to foreign exchange earnings (Andel 2000; Shiva and Verma 2002);

and support biodiversity and other conservation objectives (FAO 1995; Arnold and Ruiz Pérez 1998; Marshall et al. 2005; Charlie and Sheona 2004). Furthermore, NTFPs can be harvested with relatively little impact on the forest environment (Myers 1988; Neumann and Hirsch 2000; FAO 2008).

The significance of NTFPs effectively captured the imagination of conservationists around the world when an article by Peter et al. (1989) published in 'Nature' claimed that more money could be earned from tropical forests by collecting these products than from logging (Choudhury 2007). Since then, the importance of NTFPs has moved to the centre stage of the global development agenda. The Food and Agriculture Organisation (FAO) of the United Nations was one of the first agencies to promote NTFPs through their programme on *non-wood forest products*. Over the past 20 years, other international agencies such as the World Bank, Canadian International Development Agency (CIDA), International Development Research Centre (IDRC), Center for International Forestry Research (CIFOR), International Union for the Conservation of Nature (IUCN) and the Biodiversity Support Programme (BSP), among others, have incorporated the concept of NTFPs into their research and development programmes. The concept of NTFPs, therefore, became an economically acceptable ecological option of

development. There was also an assumption, often implicit (Belcher 2003), that making forests more valuable to local users can encourage forest conservation and poverty reduction (Plotkin and Famolare 1992; Schreckenberg et al. 2006; Ahenkan and Boon 2008; Mbuvi and Boon 2008).

NTFP-based development was, therefore, born as a new development paradigm (Choudhury 2007) capable of accommodating many conflicting needs of forest depending communities. Within the context of emerging new international commitments to address *rural poverty*, such as the Millennium Development Goals (MDGs), the *commercialisation* of NTFPs is recognised as having the potential to achieve dual conservation and development goals by *increasing the value of forest resources to local communities for poverty reduction and human development* (FAO 1995; Wollenberg and Ingles 1998; Neumann and Hirsch 2000; Marshall et al. 2003; Wunder and Angelsen 2003; Sunderland and Ndoye 2004). Globally, *international trade in NTFPs is estimated at USD 11 billion annually* (Ndoye and Ruiz Pérez 1998; Shiva and Verma 2002; Marshall et al. 2005; Ahenkan and Boon 2010). These products provide a “*green social security*” to billions of people in the form of low-cost building materials, income, fuel, food supplements and traditional medicines. In some cases, the revenues earned from NTFPs are the only source of cash income, which increases the dependency of people on commercially interesting NTFPs resources (Andel 2000; Sheil and Wunder 2002; Marshall et al. 2005).

2. DEFINING NTFPS AND THE CONFUSION IN SEMANTICS

Despite the surge in importance of NTFPs and the significant global interest surrounding them, a number of basic definition and conceptual issues remain unresolved. The term “NTFPs” has proved difficult to define amongst forest experts, conservationists, development organisations and the pioneers of the concept due to some of the *blurred boundaries between timber and non-timber products, the underlying difficulty in defining a forest and the evolving nature of the concept and the potential to bring together a diverse set of interests and experiences to the idea of integrated forest man-*

agement. Consequently, the term “NTFPs” has generated a lot of *controversy* as regards its meaning (Arnold and Ruiz-Perez 1998; Ros-Tonen et al. 1998; Shiva and Verma 2002; Belcher 2003). The debate on the definition of NTFPs has raged on since the term was coined during the early 1980s by authors like Posey, Peters, de Beer and McDermott (Neumann and Hirsch 2000; Jean-Laurent and Patrick 2002; Belcher 2003). Though significant information has been documented on the socio-economic importance and potential of NTFPs utilization and their impacts on poverty reduction, livelihood improvement and environmental sustainability, little progress has been made to clear the accruing confusing in terminology and semantics. There is an overabundance of terminologies which has been used interchangeably by various authors and organisations with terms such as “non-wood forest products”, “minor forest products”, “forest biological resources”, “special forest products”, “non-wood forest benefits” “non-wood goods and services”, “forest garden products”, “wild products”, “natural products”, “non-timber forest products”, “by-products of forests”, “secondary forest products” “minor forest products”, and “hidden harvest” (Chandrasekharan 1995; FAO 1999; Wunder and Angelsen 2003; FAO 2006).

In 1995, FAO attempted a first step towards a harmonised definition of NTFPs by organising the “International Expert Consultation on Non-Wood Forest Products” in Indonesia to agree on a common definition. Unfortunately, there is still no universally accepted definition of NTFPs and the confusion over the definition and scope of ‘NTFP’ continues. There is still no agreement on universally acceptable terminology to describe the product (FAO 1999; Wong 2000; Bih 2008). It has become very difficult *to distinguish between NTFPs from natural forests and those from human-influenced systems and the fact that the study of non-timber forest products has been dealt with by people from varied fields of study* such as forestry, ethnobiology, economic botany, social development, natural resource economics, conservation biology, protected area management, agro-forestry, marketing, commercial development, ecological anthropology, cultural geography and human ecology has complicated the problem (Bih 2008; Ahenkan and Boon 2010).

Even the terms ‘forest’ and ‘product’ are

debatable (FAO 2001; Ahenkan and Boon 2010). Literally, NTFPs includes *all products that are derived from forests with the exception of timber*. In practice, various products and production environments are included or excluded depending on the objectives of the author (Belcher et al. 2005). The lack of a common definition and terminology and the multiplicity of interest have been regarded as hindrances to research and development of NTFPs (Belcher 2003). The difficulty in harmonising the definition of NTFPs also makes comparison of studies and statistics on NTFPs very difficult particularly because of the different definitions and classifications used by the different authors and in which some products are included while others are excluded. It has further limited the creation of a comprehensive and consistent classification system on NTFPs (Belcher and Ruiz-Pérez 2001), which can only be based on an agreed terminology including clear definitions. Belcher et al. (2005) note that the discussion has been confounded by ambiguous and inconsistent definitions of the term “NTFP” and by the very different approaches that have been followed to research and develop NTFPs. This has hindered the understanding of the role and potential of NTFPs for livelihood improvement and conservation (Belcher et al. 2005).

Nevertheless, several attempts have been made by different authors and international institutions to find an “acceptable norm” for defining NTFPs (de Beer and McDermott 1989; Peters 1989; Chandresekharan 1995; FAO 1995; Ros-Tonen et al. 1995; Peters 1996; FAO 1999; Wong 2000; Shiva and Verma 2002; Marshall and Schreckenber 2005; Ahenkan and Boon 2008). However, most of the NTFPs definitions proposed in the literature also tend to expound on specific species, aspects and products in line with different authors’ focal interests (FAO 1995; Morris and Bay 2002; Mbuvi and Boon 2008).

As has already been mentioned, the important elements of the debate over the concept of NTFP depend on the interests and priorities of the proponents and are usually centred on five main issues;

- *The Nature of the Product* – inclusion/exclusion of non-industrial timber and other wood products (Jean and Patrick 2002; Belcher 2003),
- *The Source of the Product* – inclusion/

Box 1: Definition of NTFPs

De Beer and McDermott (1989)

The term “Non Timber Forest Products” (NTFPs) encompasses all biological materials other than timber, which are extracted from forests for human use.

Chandresekharan (1995)

Non-wood forest products include all goods of biological origin, as well as services, derived from forest or any land under similar use, and exclude wood in all its forms:

Ros-Tonen et al. (1995, 1998)

“all tangible animal and plant products from the forest, other than industrial wood” In 1998, they slightly modified this definition to include

“...all tangible animal and plant forest products other than industrial wood, coming from natural forests, including managed secondary forests and enriched forests.

Mathur and Shiva (1996)

All products obtained from plants of forest origin and host plant species yielding products in association with insects and animals or their parts and items of mineral origin except timber, may be defined as Minor Forest Products (MFP) or Non-Wood Forest Products (NWFP) or Non-Timber Forest Products (NTFP).

M. P. Shiva (1998)

All usufruct/utility products of plant, animal and mineral origins except timber obtainable from forests or afforested / domesticated land areas are termed as Non-Timber Forest Products (NTFP) or Non-Wood Forest Products (NWFP)/Minor Forest Products (MFP).

FAO (1999)

Non wood forest products (NWFP) are defined as ‘goods of biological origin other than wood derived from forests, other wooded lands and trees outside forests’ (FAO 1999).

Wong(2000)

‘...all products derived from biological resources found on forest land but not including timber, fuelwood, or medicinal plants harvested as whole plants’

Source: Rajesh Rajchal 2006; Pfund and Patrick Robinson 2002

exclusion of forest/tree plantations, managed forest, grassland, managed agroforestry systems within agricultural land,

- *The Nature of Production of the Product* – gathered only from the wild, or include those that are domesticated (e.g. rubber, mushrooms, snails, oil palm and other industrial tree plantation crops) (Belcher 2003),
- *The Scale of Production* – capital intensive, industrial scale versus small scale mixed systems,
- *The Ownership and Distribution of Benefits* (Ros-Tonen 1999; Belcher 2003; Marshall et al. 2005).

The debate also centres on the *expected contribution of NTFPs to poverty reduction, health, conservation as well as on their current and potential benefits to the poor communities versus their further impoverishment* (FAO 1995; Peters 1996; Pfund and Patrick Robinson 2002).

At the centre of the debate over NTFPs is whether or not to include *woody plant material and products* in the definition, the question of whether *the product or service is produced in a forest environment*; what *exactly is a forest*; and the more problematic question of whether an *NTFP is really an NTFP if it is cultivated*. Some argue that if the product has been domesticated and produced outside a forest environment, then it is no longer a 'forest product'. An important question that has been raised is whether non-timber forest products are only those biological resources that originate from within natural forests (Ros-Tonen 1999; Belcher 2003; Rajesh Rajchal 2006). This raises a whole different set of questions as to how a natural forest is defined and whether the concept of NTFP should be tied to such a definition. Intractable and thorny questions include whether products such as honey, mushrooms, medicinal plants and fruits harvested from the forest and the ones domesticated or under managed regimes should all be classified as NTFPs. Should grass-cutters and snails from the forest and the ones produced under managed regimes be included as NTFPs or a chanterelle harvested from a planted jack pine plantation from a natural regeneration, post-fire jack pine stand is included? (Belcher 2003; Ros-Tonen 2000).

The controversy about whether or not to include cultivated products of forest origin in the definition of NTFPs is as old as the term itself. According to de Beer and McDermott (1989), who were among the pioneers writers on the subject, NTFP "encompasses all biological materials other than timber which are extracted from forests for human use". They defined 'forest' as a natural ecosystem in which trees are a significant component. However, forest products are derived not only from trees, but also from all plants, fungi and animals (including fish) for which the forest ecosystem provides habitat. Clark et al. (2004) argue that products such as *Gnetum* occur naturally in forest openings, but are also found in secondary forests, fallow fields and sometimes in mixed crop fields. Thus, there is a continuum from 'wild' or 'forest' resources to cultivated and domesticated ones. In other words, it is often difficult to decide whether a resource should be described as an NTFP or as an agricultural product.

This controversy has led to some of the NTFPs pioneers, including Ros-Tonen et al.

(1995) and Belcher (2003), attempt to redefine the term NTFP in order to distinguish between forest products collected from the 'wild' and domesticated products of forest origin. For instance, Ros-Tonen et al. (1995) defined non-timber forest products as "all tangible animal and plant products from the forest, other than industrial wood". But in 1998, they slightly modified this definition to include "*all tangible animal and plant forest products other than industrial wood, coming from natural forests, including managed secondary forests and enriched forests* (Ros-Tonen et al. 1998) because in practice, the distinction between 'wild' and semi-cultivated products is often difficult to make (Ros-Tonen et al. 1998; Belcher 2003).

The fact is that many items that are being marketed as NTFPs originate both from natural forests and from man-made vegetation types and domestication. Economically successful NTFPs in particular tend to be domesticated (Homma 1992). Van Dijk, J. Wiersum (1999) note that a high proportion of the NTFPs exploited in Southern Cameroon are not collected from natural forests, but harvested from vegetation types modified by man and domestication. In the transition from 'wild' to cultivated products, several NTFPs may come from both natural forests and home gardens or plantations. The best known example is that of rubber from *Hevea brasiliensis*, which is collected from natural forests in Brazil, while in Indonesia it comes from plantations. The same occurs within one and the same country with gum Arabic from *Acacia senegal* in Sudan and rosin and turpentine made of the oleoresin of *Pinus merkusii* in Indonesia (Coppen 1999). When such products appear on the market, they bear no label to clarify their origin.

The problem of the concept of NTFPs also lies in the fact that the distinction between natural and human-modified forest ecosystems and products cannot always be easily drawn. There is often a gradual transition from the collection of 'wild' products in natural forests to enrichment planting in secondary forest and intensively managed home garden production (Ros-Tonen et al. 1995). Belcher (2003) also argues that, from the perspective of a forest user and from a development perspective, even the distinction between timber and non-timber products is false because within systems where communities have control over forest resources,

people manage forest products that are most valuable to them. By creating such a distinction between wood and non-wood products could have negative consequences in terms of both conservation and development, because it contains and supports the implicit assumption that timber is for the rich and that NTFPs are for the poor (Belcher 2003).

Various studies, including Tropenbos (1999), also raise this problematic and Hammen and Rodríguez (1996) illustrate how indigenous people in the Colombian Amazon region manipulate forest succession in order to promote the growth of such useful species as the chontaduro palm (*Bactris gasipaes*) and the guamo fruit tree (*Inga* spp.). De Jong et al. (2000) provide an example of the evolution of a man-made vegetation type in West Kalimantan, which appears to be a match for natural forest in biological diversity. Some authors prefer to restrict the use of the term NTFPs to products from natural forest systems, whether they are modified by human intervention or not (Ros-Tonen 2000). The reason for doing so lies in the fact that the term was coined in relation to strategies for the conservation of biodiversity in natural forests (Ros-Tonen 1998). Several alternative terms have been suggested for products from man-made vegetation types, such as forest garden products (Senanayake 1999), non-timber plantation products (Ros-Tonen 2000) or agroforestry products (Ottens 1999). Others too restrict the category to “extractive” products that are collected from the wild (natural regeneration), while others include managed or cultivated products. Some restrict their discussion to plants, while some include animals. Planted forests, grasslands, or other environments may or may not be included. As a result, generalisations about NTFPs are confusing at best, and can lead to the formulation of inappropriate policies. Belcher et al. (2005) note that if we take the perspective of forest-dwelling people, we might even consider replacing the term NTFPs with “community-exploited forest products”, even if this might be confusing in relation to FAO statistics, in which forest products mostly refer to wood products. From a local perspective, the real issue is not whether these locally exploited products are timber or non-timber, but how they can be managed so that they contribute optimally to people’s livelihoods and can be harvested with minimal damage to the

forest. Ros-Tonen et al. (1998) note that the transitions are so gradual and the products remain the same, why should we bother about the terminology?

World-wide, NTFPs are produced and harvested under a broad range of management regimens, ranging from strictly wild harvested, semi-domesticated and more intensively managed systems (CNTR 2006). Harvesting options range from gathering from the wild through to intensive cultivation (Ros-Tonen and Wiersum 2003; Ahenkan and Boon 2010). Belcher et al. (2005) therefore proposes a sub-division of the NTFPs continuum into three main categories: *wild*, *managed*, and *cultivated*. The *wild products* are gathered from fallow, secondary forests or mature forests, with little transformation of forest structure due to the extraction of NTFPs. Regeneration often depends on natural processes, and forests are left by and large to natural successional stages. *Managed products* are produced in forests that are partially transformed through treatments such as weeding or crown opening to encourage the production of preferred species. Target species regenerate through natural processes, and natural succession still operates, allowing for multiple uses of the forest and maintaining relatively high biodiversity. *Cultivated NTFPs* are those deliberately planted as seeds or seedlings or breeding stocks such as grass-cutters and snails. For example, *Dacryodes edulis* (safou fruit) and *Irvingia gabonensis* (‘bush mango’) have been included as NTFPs. These fruit trees grow in natural forest areas but are also widely cultivated, and in many areas, the majority of fruits are harvested from cultivated trees (Schreckenberg et al. 2006).

3. CLASSIFICATION OF NTFPS

A globally applicably *standard classification system* for NTFPs does not exist (Shiva and Verma 2002). However, NTFPs can be classified in many different ways: according to end use (medicine, food, drink, etc), by the part used (roots, leaves, barks, etc); or in accordance with major *international classification systems* such as the *Harmonized Community Description and Coding System* developed under the auspices of the Customs Cooperation Council (Shiva and Verma 2002). For the purpose of this research, NTFP are classified according to their end uses as indicated in Table 1.

Table 1: Categories of non- timber forest products

<i>Plant products</i>		<i>Animals and animal products</i>	
<i>Categories</i>	<i>Description</i>	<i>Categories</i>	<i>Description</i>
Food	Vegetal foodstuff and beverages provided by fruits, nuts, seeds, roots	Living animals	Mainly vertebrates such as mammals, birds, reptiles etc.
Fodder	Animal and bee fodder provided by leaves, fruits etc.	Honey, beeswax	Products provided by bees.
Medicines	Medicinal plants (e.g. leaves, bark, roots) used in traditional medicine and/or by pharmaceutical companies	Bushmeat	Meat provided by vertebrates, mainly mammals
Perfumes and cosmetics	Aromatic plants providing essential (volatile) oils and other products used for cosmetic purposes	Other edible animal products	Mainly edible in vertebrates such as insects (e.g. caterpillars), crabs and other “secondary” products of animals (e.g. eggs, nests)
Dying and tanning	Plant material (mainly bark and leaves) providing tannins and other plant parts (especially leaves and fruits) used as colorants	Hides, skins	Hide and skin of animals used for various purposes
Utensils, handicrafts	Heterogeneous group of products including thatch, bamboo, rattan, wrapping leaves, fibres (e.g. Arouma, Bwa Flo, Silk cotton floss, Screw pine)	Medicine	Entire animals or parts of animals such as various organs used for medicinal purposes (e.g. caterpillars, crab legs, snake oil)
Construction materials	thatch, bamboo, fibres,		
Ornamentals	Entire plants (e.g. orchids, ferns, philodendron) and parts of the plants (e.g. pots made from roots) used for ornamental purposes	Colorants	Entire animals or parts of animals such as various organs used as colorants
Exudates	Substances such as gums (water soluble), resins (water insoluble) and latex (milky or clear juice), released from plants by exudation	Other nonedible animal products	e.g. bones used as tools

Source: Adapted from FAO 1995; Shiva and Verma 2002

4. IMPACT OF NTFPS EXTRACTION ON FOREST RESOURCES

It is often assumed that NTFPs are sustainably harvested and that this “*green social security*” will always be available to resource users. This is not always the case. The early interest in NTFPs was encouraged by the belief that NTFP commercialisation that added sufficient value to forest products could contribute to forest conservation (Nepstad and Schwartzman 1992). Where NTFPs are harvested in a sustainable manner, this may indeed be the case (Sunderland et al. 2004; Belcher and Schreckenberg 2007). Several scientists have stressed that NTFPs can be harvested without much destruction of the forest, while maintaining essential environmental functions and preserving biological diversity (Anderson 1990; Plotkin and Famolare 1992; Peters 1996). The *extraction of NTFPs* is considered sustainable if it has no long-term deleterious effect on the regeneration of the harvested population, and when the yield remains more or less constant throughout the years (Cunningham 2000). Nevertheless, *uncontrolled extraction* due to population increases, high demand for NTFPs and

low prices has caused *species extinction* and *forest degradation* in many countries (Browder 1992; Ahenkan and Boon 2010). *Unsustainable harvesting of NTFPs* does have a number of *ecological impacts*, including a gradual reduction in the vigour of harvested plants, animals, as well as decreasing rates of seedling establishment of harvested species, potential disruption of local animal populations and nutrient loss from harvested material (Peters 1996). There was ample evidence of over-harvesting even at the time that NTFP exploitation was promoted as nature conservation strategies according to Sunderland et al. (2004).

5. THE NEED FOR NTFPS FARMING

In many parts of the world, local people are losing access to valued plant and animal species either through overexploitation and habitat destruction or loss of access as former harvesting areas are included within national parks or forest reserves. Achieving sustainable *NTFPs harvest and forest conservation* relies entirely on the ability to reconcile ecosystem productivity with human exploitation (Marshall et al. 2005). Higher demand increases pressure on the

resource and as resources become depleted, three main strategies are employed to militate against shortfalls in supply: travel further to find the product, substituting the particular product with a similar product or to develop a more intensive or cultivated sources of supply (Cunningham 2000; Ahenkan and Boon 2010). As a result of the recognition that the *extraction of NTFPs* from natural forests has limited potential for improving household economies, several scholars began to question whether the objective of *enhancing forest-based livelihoods through NTFPs* could not be better fulfilled by optimising NTFPs production through domestication (Kusters et al. 2001; Arnold and Ruiz Pérez 2001; De Jong 2002). Ros Tonen (1999) and Ahenkan and Boon (2008) state that it is incorrect to suggest that NTFPs can be harvested indefinitely without proper management practices and domestication to sustain their yield and therefore call for the need for intensification of management and semi-domestication of these products of forest origin, including honey, mushrooms, snails, grass-cutters, medicinal and aromatic plants and fruits. The contribution of NTFPs to improving livelihoods can best be assured through a process of gradual domestication of NTFPs in human-modified (agro) forest types. Rajesh Rajchal (2006) notes that intensified management and domestication of NTFPs may be an important means of improving livelihood of poor through higher yields, improved and more consistent quality and control over the timing of harvests and reduce pressure on wild and presumably endangered resources. The study by De Jong (2000) of forest products and local forest management in three Bidayuh villages in West Kalimantan also confirms the co-existence of several NTFP exploitation systems involving various types of managed natural forests and domestication types.

6. CONCLUSION

From the discourse above, it is clear that the term “NTFPs” has proved difficult to define in a universally acceptable way. The definition and scope of the concept still remain a major challenge to research on and the development, and promotion of NTFPs. Conflicting interests and objectives have also subjected the terminology and usage of the term to a lot of ambiguity and inconsistencies. Nevertheless, the original con-

servation/development proposition in the NTFP debate since its inception has been subjected to various discussions and revisions. Consequently, the concept is gradually evolving from a *resource focus only on* natural forests to include cultivation of products of forest origin. Most of the products that are being marketed as NTFPs originate both from natural forests, managed vegetations and domestication. In practice, the distinction between ‘wild’, semi or cultivated products will continue to be difficult. The transitions are so gradual and the products remain the same at the market level and therefore the terminology is unnecessary. NTFPs cannot be harvested indefinitely without proper management and domestication practices to sustain their yield. The products are being depleted at an alarming rate and forest dependent communities continue to lose them, either through over-exploitation or habitat destruction. Since the objective of NTFPs is to improve livelihoods and conservation of forest resources, these resources can best be assured through a process of gradual domestication in human-modified systems. Unless urgent measures are taken to reverse the current trend of harvesting NTFPs from the wild, most of these products will disappear before they are documented and the term NTFPs will eventually be a myth. However, there is the need for sub-division of the NTFPs continuum into natural, managed, and *cultivated* in order to enhance their research development, and promotion.

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