



## A REVIEW ON ENHANCED WELL-BEING DERIVED FROM FORESTS

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### Abstract

Forests provide enormous opportunity, Research have shown that forest being a vast source of plant, microbial material and medicine especially for developing continent. The use of forest can enhance well-being by reducing health care budget and enhancing lives. Issues in providing health from forests are due to various factors ranging from ecosystem and biodiversity degradation, deforestation and climate change. More so research findings are inadequate, As a result of poor policy-making and personnel knowledge of the benefit of green areas in enhancing human health. Ln this regard, there should be a synergy between health and environmental professionals in different sectors.

**Keywords:** Forests, Human health, Bioactive compounds, Forest food, infectious diseases.

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### Introduction

Green spaces and trees provide sufficient ecosystem services thereby enabling a good living environment and reintroducing degraded ecosystems. Apart from tangible products, Green areas for instance mitigate floods, droughts and the effect of noise, purify water, bind toxic substances, maintain water quality and soil fertility, aid in erosion control, protect drinking water. Moreso ecosystem services and goods that trees supply are endangered by deforestation, pollution, biodiversity degradation and climate change.

The effect of green areas on human well-being is a case not very visible very within the framework of biodiversity, climate change, poverty and human well-being. This review aims to contribute to the subject about human well-being, ecosystem services and biodiversity by emphasizing on the relationships between forests and human well-being.

### 1. Green areas improve physical and mental health

Instances of poor health have increased in cities due to urbanization and modern living related to high in active lifestyle and physiological stress. Lately, the benefits of green areas in promoting human well-being has been known ( Bjork *et al*, 2008, Coifer *et al*, 2006, Dulger *et al*, 2004, Hakkinen *et al*,1999, Hartig *et al*,2003.)

Natural and green spaces enhance physiological and physiological well-being in many ways: Green areas aid in minimizing stress, promote both mental and physical recovery.Green areas may help in coping ill-health caused by mental processes such as stress and in curing cases such as burn-out and depression. (Irvine *et al*, 2002.).

Some survey report that Green areas enhance well-being ( Hartig *et al*, 2006 ).These facts, for instance lower levels of blood pressure, heart rate, skin conductivity and muscle tension in green settings than in urban areas( Hartig *et al*, 1991.).Some studies show that activities in can alleviate the signs of attention-deficit/hyperactivity disorder (AD/HD) in children (Herzog *et al*, 2003.).The knowledge on the good health effects of green settings in urban areas are weakened by increased buildings and land - use changes.The insight on the positive health effects of forests needs to be better integrated into land-use planning in order to protect green settings near homes.

### 2. Green areas provide bioactive components and drugs.

Forest gives rich source of substances that can be used in pharmaceutical and nutraceuticals.Tree and plant extracts have various bioactive compounds such as polyphenols (including flavonoids, phenolic acids, tannins), phytoestrogens ( including lignans ), stilbenes, carotenoids,sterols,etc( John *et al* 2006.) which has biological activities such as anticancer activity,antiatherogenic and antioxidant benefit ,for instance xylitol,which can treat tooth decay (dental caries) ( John *et al* 2006.),is sourced from hardwood trees.The health benefit of mushrooms is a global convention mostly in Asian countries.Fungi are known to have high medicinal benefit ( Kreuels *et al*,2008 ).Macrofungi have antimicrobial effects, they tend to suppress the growth of bacteria, fungi,protozoa and cancerous cells ( Kuo *et al*, 2004 ). It should be known there has been a sequence of facts where known antitumor agents have been manufactured by fermentation of endophytic fungi isolated from plants ( Lindequist *et al*, 2005 ).One of the issues affecting this use in recent times is the declining rainforests, which harbors a large source of new bioactive substances.. While sourcing for medicinal plants and pharmaceuticals, the rights and living of local indigenes and communities should be considered. (Irvine *et al*, 2002).

### 3. Food security is assured by the forest.

Natural environment helps to fight inadequate and infections of the less privilege people in low-income countries. Food from the forest gives a safety in case of food scarcity and alleviates lack of proper nutrition. Most foods from the forest are fruits, nuts,

wild leaves, palms, wild roots and tubers, mushrooms and insects. Foods from the forest gives proteins and fat, carbohydrates, vitamins and minerals (Irvine *et al*, 2002 ).

Conservation of green spaces and woodlands is beneficial for the provision of forest food. The conventional ideas of local people and communities in getting foods from the forest and medicine from forest plant species should be given more consideration. Sustainable forest practices that maintain important species and their food value need to be enhanced and known (Moutsatsou, 2007).

#### 4. Forest- associated infection and dangers

Inhabitants of forest areas may encounter forest-associated diseases include the pathogen, the vector and the human. The vectors are mostly insects, could also be mammals. Examples of forest related diseases are Puumala virus (PUUV), Lyme borreliosis, Hantavirus cardiopulmonary syndrome (HCPS), Malaria are related with forests, which are the favorite sites for vector and host populations ( Newman *et al*, 2007 ). Deforestation outcome has brought about the replacement of volatile vector for instance when mosquito species decreases, the existing surviving species are more volatile vectors for malaria .The synergy between forest ecosystem and disease transmission is complex. Restoration of forest ecosystems is of importance, but is not enough to cause an epidemic. (Zell, 2004 ).

#### Conclusion

Despite the incorporation of research outcome into policy making and actual work, most implementation of research outcome is not sufficient. The benefit of stress-reducing effects of green spaces is not yet known and only a percentage of pharmaceutical and nutraceutical compounds obtained from forests is known. While the conventional idea of indigenous communities in forest foods and medicine is not documented enough .forest plant species is not recorded to a sufficient extent. There should be a synergy between medicine obtained from forest species for pharmaceuticals and sustenance of local indigenes. forest species for pharmaceuticals and maintaining local livelihoods. More so the enhancement of research and ideas about the health effects of forests calls for strong synergy among stakeholders, most especially the health and environmental professionals.

#### References

- Bjork J., Albin M, Grahn P, Jacobson H, Ardo J, Wadbro J, (2008)..Recreational values of the natural environment in relation to neighbourhoods satisfaction, physical activity, obesity and well-being. *Journal of Epidemiology. Community Health.*; 62 : 20 - 25
- Coifer C, Shell D, Kishi M. (2006). Forests and human health. Assessing the evidence. CIFOR Occasional Paper No.45.
- Hakkinen S, Heinonen M, Karenlampi S, Mykkanen H, Ruuskanen J, Torronen R. (1999) Screening of selected flavonoids and phenolics acids in berries. *International Journal of Food Research.* 32 : 345 - 353.
- Hartig T, Evans G W, Jamner L D, Davis D .S, Gatling T. (2003). Tracking restoration in natural and urban field settings. *Journal of Environmental Psychology.* 40:10-15
- Hartig T, Staats H. (2006). The need for psychological restoration as a determinant of environmental preferences. *Journal Environmental Psychology.* 26:215-216.
- Herzog T.R, Maguire C.P, Nebel M.B, (2003). Assessing the restorative components of environments. *Journal of Environmental Psychol.* 23:159-70.
- Kuo F.E, Taylor A.F (2004) A potential natural treatment for attention-deficit/hyperactivity disorder: evidence from a national study. *American Journal of Public Health.* 94:1580-1600
- Irvine K.N, Warner S L. (2002). Greening healthcare: practicing as if the natural environment really mattered. *Journal of Alternative Health Medicine.* 8: 76 - 83.
- Wolfe N.D, Daszak P, Kilpatrick A.M, Burke D.S. (2005). Bushmeat hunting, deforestation and prediction of zoonoses emergence. *Journal of Public Medicine.* 11:1822-7.
- Moutsatsou P. (2007). The spectrum of phytoestrogens in nature: our knowledge is expanding. *Journal of Public Medicine.* 6:173-93.
- Lindequist U, Niedermeyer T H J, Julich W.D (2005). The Pharmaceutical potential of mushrooms. *Evidence-based Complimentary Alternative Medicine.* 2:285-99.
- Dulger B, Gonuz A, Gucin F. (2004). Antimicrobial activity of the macrofungus *Cantharellus cibarius*. *Pakintan Journal of Biological sciences.* 7:1535-8.
- Newman D J, Cragg G M. (2007). Natural products as sources of new drugs over the last 25 years. *Journal of Natural Products.* 70:461-77.
- Coifer C, Shell D, Kishi M. (2006). Forests and human health. Assessing the evidence. *CIFOR Occasional Paper No.45*
- John T, Maundy P. (2006). Forest biodiversity, nutrition and population health in market-oriented food systems. *Journal Of Public Medicine.* 224:34-40.
- Kreuels B, Kobbe R, Adjei S, Kreuzberg C, Von Resen C, Bater k (2008). Spatial variation of malaria incidence in young children from a geographically homogeneous area with high endemicity. *Journal of infectious Disease.* 197:85-93.
- Walsh J. F, Molyneux D.H, Burley M.H. (1993). Deforestation: effects on vector-borne disease. *journal of Parasitology.* 106:55-75.
- Zell R. (2004) Global climate change and the emergence/re-emergence of infectious diseases. *International Journal of Medical Microbiology.* 296:16-26.

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Hartig T. Mang M, Evans G W. (1991). Restorative effects of natural environment experiences. *Journal of Environmental Behaviour*.23:3-26.