Nanollose's ANCIENT FOREST FRIENDLY SOURCING POLICY

Effective: 1 August 2018

Nanollose is committed to sustainability and we are looking to play a leadership role in using industrial organic and agricultural waste products to produce plant-free cellulose to provide feedstock for products that are all too often sourced from ancient and endangered forests. Nanollose is also committed to playing a leadership role and will support supply chain solutions that promote responsible environmental and ethical practices in manufacturing, and the protection of global ecosystems including ancient and endangered forests.

Demonstrate Corporate Leadership

Nanollose recognizes that business leadership and long-term success must consider the environment. Consequently, Nanollose is dedicated to building environmental awareness among customers, employees, suppliers and peers.

Conserve Ancient and Endangered Forests and Ecosystems

Nanollose aims to provide a clear solution to avoid sourcing textile fibres and pulp/paper inputs from the world's ancient and endangered forests, by producing these valuable raw materials from industrial organic and agricultural waste. We are aiming to provide innovative fibre solutions that can meet marketplace demand while also protecting the world's remaining ancient and endangered[i] forests including the Canadian and Russian Boreal Forests; Coastal Temperate Rainforests[ii]; tropical forests and peat lands of Indonesia[iii], the Amazon and West Africa, and the protection of biodiversity and ecosystems contained within these forests.

As the issue of ancient and endangered forest fibre in packaging, paper and cellulosic fabrics gains increasing awareness among global retailers, brands, designers and producers, Nanollose will work with suppliers, Canopy (www.canopyplanet.org) and businesses that have Canopy policies in place to support the protection of ancient and endangered forests and forward solutions to reduce demand on our forests.

Innovation and Development

Nanollose produces new fibre and pulp from microbial nanocellulose from industrial organic and agricultural waste products. This provides Nanollose's customers with a guarantee that the company is not sourcing from controversial sources including wood from: illegal logging[iv], wood logged in contravention of First Nations/indigenous peoples' rights or in contravention of Free, Prior or Informed Consent (FPIC), high carbon value landscapes or endangered species habitat.

Nanollose is open to exploring partnerships with other organizations that enable them to reduce and ultimately end their use of pulp, fibre, yarn, textiles and dissolving pulp sourced from ancient and endangered forests, by providing them with tree-free cellulosic alternatives made from industrial organic and agricultural waste[v].

Advance Joint Conservation Solutions

Nanollose supports the implementation of visionary agreements in key forest areas, such as the Canadian Boreal Forests[vi], Coastal Temperate Rainforests and Indonesia's and the world's Tropical Rainforests. We look to Canopy to identify opportunities to encourage existing and new initiatives that seek to protect the world's remaining ancient and endangered forests.

Reduce our Carbon Footprint
Nanollose aims to reduce the company's greenhouse gas emissions and where possible will play a role in mitigating climate change by participating in initiatives that reduce the loss of carbon-rich forests (e.g. ancient old growth temperate rainforests and forests growing on peat lands) and by encouraging the development of products made with agricultural residue fibres and post-consumer recycled content.

Pollution Prevention
Viscose production is a resource-intensive process that can lead to air and water emissions that impact overall environmental quality. Nanollose's long term plan is to use and recommend viscose manufacturers that use best practices with its fibre production, monitor and reduce overall emissions, use a closed loop process, and minimize air and water pollution and encourage our supply chain partners to do the same.

Paper and Packaging
Recognizing that avoiding impacts to the world's forests is also tied to Nanollose's own use of paper and packaging, Nanollose is committed to improved efficiency in paper use in its own operations, and reduce waste. In line with Nanollose's own business production, Nanollose will aim to source agricultural residue and/or 100% post recycled content paper and packaging products.[vii].

Promote Industry Leadership
Nanollose recognizes the benefit of creating environmental awareness amongst its team, customers, and partners. The company will work to highlight our environmental efforts on our website, in public communications and social media, and in partnership with stakeholders.

Strong Forest Management Standards
Nanollose fully supports responsible forest management practices that protect biodiversity and ecosystem integrity, provide long-term social and economic benefits to communities, and facilitate a stable, sustainable supply chain and climate of operational certainty. We encourage our supply chain partners to preference fibre inputs that have not been sourced from ancient and endangered forests, and instead use tree-free cellulose or give preference to fibre certified to the Forest Stewardship Council (FSC) standard where virgin fibre is needed.

Wayne Best, PhD
Executive Chairman

1 August 2018

[i] Ancient and endangered forests are defined as intact forest landscape mosaics, naturally rare forest types, forest types that have been made rare due to human activity, and/or other forests that are ecologically critical for the protection of biological diversity. Ecological components of endangered forests are: Intact forest landscapes; Remnant forests and restoration cores; Landscape connectivity; Rare forest types; Forests of high species richness; Forests containing high concentrations of rare and endangered species; Forests of high endemism; Core habitat for focal species; Forests exhibiting rare ecological and evolutionary phenomena. As a starting point to geographically locate ancient and endangered forests, maps of High Conservation Value Forests (HCVF), as defined by the Forest Stewardship Council (FSC), and of intact forest landscapes (IFL), can be used and paired with maps of other key ecological values like the habitat range of key endangered species and forests containing high concentrations of terrestrial carbon and High Carbon Stocks (HCS). (The Wye River Coalition's Endangered Forests: High Conservation Value Forests Protection – Guidance for Corporate Commitments. This has been reviewed by conservation groups, corporations, and scientists such as Dr. Jim Strittholtt, President and Executive Director of the Conservation Biology Institute, and has been adopted by corporations for their forest sourcing policies). Key endangered forests globally are the Canadian and Russian Boreal Forests; Coastal Temperate Rainforests of British Columbia, Alaska and Chile; Tropical forests and peat lands of Indonesia, the Amazon and West Africa. For more information on the definitions of ancient and endangered forests, please go to: http://canopyplanet.org/solutions/ancient-forest-friendly/the-science-behind-the-ancient-forest-friendly-brand/

[ii] Conservation solutions are now finalized in the Great Bear Rainforest, located in coastal temperate rainforests that originally covered 0.2% of the planet, and where now less than 25% of the original forests remain. On February 1st, 2016 the Government of British Columbia, First Nations, environmental organizations and the forest industry announced 38% protection in the Great Bear Rainforest and an ecosystem-based management approach that will see 85% of this region off limits to logging. Provided these agreements hold – sustainable sourcing has been accomplished in this ancient and endangered forest. We encourage ongoing verification of this through renewal of Forest Stewardship Council certification. British Columbia's last stands of coastal temperate rainforests on Vancouver Island are not currently afforded the same future. We look forward to supporting and encouraging protection for landscapes of hope on BC's Vancouver Island.

[iii] Indonesia experiences the second highest rate of deforestation among tropical countries, with the island of Sumatra standing out due to the intensive forest clearing that has resulted in the conversion of 70% of the island's forested area (FAO Forest Assessment 2010; Margono, B.A. et al. 2012). Asia Pulp & Paper (APP) and Asia Pacific Resources International Ltd. (APRIL) have been criticized by local and international groups for being implicated in deforesting important carbon rich peat lands, destroying the habitat for critically endangered species and traditional lands of indigenous communities, corruption, and human rights abuses (Eyes on the Forest. 2011. http://www.eyesontheforest.or.id/). Both APP and APRIL have put in place promising forest policies; tracking implementation will be key to understanding these policies offer lasting solutions for Indonesia's rainforests.

[iv] Legal forest management is management that complies with all applicable international, national, and local laws, including environmental, forestry, and civil rights laws and treaties.

[v] Agricultural Residues are residues left over from food production or other processes and using them maximizes the lifecycle of the fibre. Fibres used for pulp and paper products include cereal straws like wheat straw, rice straw, seed flax straw, corn stalks, sorghum stalks, sugar cane bagasse, and rye seed grass straw. Textiles also utilize hemp and flax straw. Where the LCA shows environmental benefits and conversion of forest land to on purpose crops is not an issue, kenaf can also be included here. (Agricultural residues are not from on purpose crops that replace forest stands or food crops.)

[vi] Protection of Boreal Forests where the largest remaining tracts of forests are located worldwide is critical and dissolving pulp is becoming an increasing threat. Canada's Boreal Forest contain the largest source of unfrozen freshwater world wide and are part of the world's largest terrestrial carbon sink – equivalent to 26 years worth of global fossil fuel use. Canopy is committed to working collaboratively on the establishment of new protected areas, the protection of endangered species and the implementation of sustainable harvesting in Canada's Boreal Forest.

[vii] See Canopy's Paper Steps: http://canopyplanet.org/resources/the-paper-steps/