S1 Table

A. The most valuable continental US tree species ranked according to 2010 to 2012 annual ecosystem service value production (USD 2010), showing the highest value species for all services combined and individually for annual climate regulation value via carbon storage, annual air quality regulation via health damages avoided due to air pollution removal ($PM_{2.5}$ and O_3), and annual net revenue from wood products, tree crops, and Christmas tree production.

Common Name	Scientific Name	Total Annual Value		
		Mean	Low	High
Loblolly Pine	*Pinus taeda*	$ 12,875,090,000	$ 10,963,110,000	$ 14,316,420,000
Douglas-fir	*Pseudotsuga menziesii*	$ 8,521,340,000	$ 5,750,440,000	$ 10,593,220,000
Red Maple	*Acer rubrum*	$ 5,994,870,000	$ 4,650,840,000	$ 7,015,250,000
White Oak	*Quercus alba*	$ 4,304,040,000	$ 3,308,050,000	$ 5,058,420,000
Sugar Maple	*Acer saccharum*	$ 4,004,970,000	$ 3,044,980,000	$ 4,730,940,000
Red Oak	*Quercus rubra*	$ 3,720,890,000	$ 2,911,450,000	$ 4,335,420,000
Tulip Tree	*Liriodendron tulipifera*	$ 3,009,210,000	$ 2,337,630,000	$ 3,518,050,000
Western Hemlock	*Tsuga heterophylla*	$ 2,607,420,000	$ 1,727,520,000	$ 3,265,490,000
Almond	*Prunus amygdalus*	$ 2,515,700,000	$ 1,907,740,000	$ 3,121,580,000
Sweetgum	*Liquidambar styraciflua*	$ 2,506,820,000	$ 1,954,980,000	$ 2,923,810,000

Common Name	Scientific Name	Carbon Annual Value		
		Mean	Low	High
Douglas-fir	*Pseudotsuga menziesii*	$ 5,906,070,000	$ 3,174,960,000	$ 7,938,230,000
Loblolly Pine	*Pinus taeda*	$ 3,972,110,000	$ 2,135,310,000	$ 5,338,840,000
Red Maple	*Acer rubrum*	$ 2,744,430,000	$ 1,475,340,000	$ 3,688,740,000
White Oak	*Quercus alba*	$ 2,041,580,000	$ 1,097,500,000	$ 2,744,040,000
Sugar Maple	*Acer saccharum*	$ 1,976,590,000	$ 1,062,570,000	$ 2,656,690,000
Western Hemlock	*Tsuga heterophylla*	$ 1,875,290,000	$ 1,008,110,000	$ 2,520,540,000
Red Oak	*Quercus rubra*	$ 1,646,360,000	$ 885,040,000	$ 2,212,840,000
Ponderosa Pine	*Pinus ponderosa*	$ 1,601,460,000	$ 860,910,000	$ 2,152,490,000
Tulip Tree	*Liriodendron tulipifera*	$ 1,373,720,000	$ 738,480,000	$ 1,846,380,000
Lodgepole Pine	*Pinus contorta*	$ 1,191,920,000	$ 640,750,000	$ 1,602,030,000

Common Name	Scientific Name	Air Pollution Damage Avoided		
		Mean	Low	High
Red Maple	*Acer rubrum*	$ 3,132,890,000	$ 883,325,000	$ 5,685,050,000
Loblolly Pine	*Pinus taeda*	$ 3,105,610,000	$ 875,460,000	$ 5,634,409,000
White Oak	*Quercus alba*	$ 2,162,070,000	$ 609,004,000	$ 3,921,343,000
Red Oak	*Quercus rubra*	$ 2,002,640,000	$ 564,145,000	$ 3,631,732,000
Sugar Maple	*Acer saccharum*	$ 1,912,120,000	$ 538,830,000	$ 3,468,605,000
Tulip Tree	*Liriodendron tulipifera*	$ 1,499,750,000	$ 422,654,000	$ 2,720,461,000
Douglas-fir	*Pseudotsuga menziesii*	$ 1,423,320,000	$ 403,836,000	$ 2,589,461,000
Chestnut Oak	*Quercus montana*	$ 1,130,560,000	$ 318,375,000	$ 2,050,585,000
Black Cherry	*Prunus serotina*	$ 1,046,020,000	$ 295,791,000	$ 1,900,619,000
Black Oak	*Quercus velutina*	$ 1,035,280,000	$ 291,794,000	$ 1,877,794,000

Common Name	Scientific Name	Timber Net Revenue		
		Mean	Low	High
Loblolly Pine	*Pinus taeda*	$ 5,797,370,000	$ 5,797,370,000	$ 5,797,370,000
Douglas-fir	*Pseudotsuga menziesii*	$ 1,183,180,000	$ 1,183,180,000	$ 1,183,180,000
Slash Pine	*Pinus elliottii*	$ 761,950,000	$ 761,950,000	$ 761,950,000
Sweetgum	*Liquidambar styraciflua*	$ 347,710,000	$ 347,710,000	$ 347,710,000
Longleaf Pine	*Pinus palustris*	$ 284,030,000	$ 284,030,000	$ 284,030,000
Western Hemlock	*Tsuga heterophylla*	$ 225,420,000	$ 225,420,000	$ 225,420,000
Black Cherry	*Prunus serotina*	$ 217,670,000	$ 217,670,000	$ 217,670,000
Tulip Tree	*Liriodendron tulipifera*	$ 135,740,000	$ 135,740,000	$ 135,740,000
Red Maple	*Acer rubrum*	$ 117,540,000	$ 117,540,000	$ 117,540,000
Sugar Maple	*Acer saccharum*	$ 116,260,000	$ 116,260,000	$ 116,260,000

Common Name	Scientific Name	Crop Net Revenue		
		Mean	Low	High
Almond	*Prunus amygdalus*	$ 2,498,180,000	$ 1,898,320,000	$ 3,098,030,000
Apple	*Malus domestica*	$ 935,060,000	$ 752,370,000	$ 1,117,740,000
Black Walnut	*Juglans nigra*	$ 588,100,000	$ 406,560,000	$ 769,630,000
Pistachio	*Pistacia vera*	$ 432,790,000	$ 360,760,000	$ 504,820,000
Pecan	*Carya illinoinensis*	$ 47,350,000	$ 12,350,000	$ 82,350,000
Hazel	*Corylus avellana*	$ 39,880,000	$ 33,100,000	$ 46,660,000
Pear	*Pyrus communis*	$ 31,130,000	$ 14,260,000	$ 48,000,000
Fig	*Ficus carica*	$ 4,400,000	$ 2,620,000	$ 6,190,000
Sweet Cherry	*Prunus avium*	-123000	-47672500	$ 47,426,467
Mandarin Orange	*Citrus reticulata*	-26467200	-59607700	$ 6,673,334

Common Name	Scientific Name	Christmas Tree Net Revenue		
		Mean	Low	High
Fraser Fir	*Abies fraseri*	$ 34,520,000	$ 32,700,000	$ 36,340,000
Noble Fir	*Abies procera*	$ 16,800,000	$ 14,370,000	$ 19,220,000
Douglas-fir	*Pseudotsuga menziesii*	$ 8,770,000	$ 4,630,000	$ 12,910,000
Balsam Fir	*Abies balsamea*	$ 4,550,000	$ 3,800,000	$ 5,290,000
Blue Spruce	*Picea pungens*	$ 3,650,000	$ 3,500,000	$ 3,800,000
Scots Pine	*Pinus sylvestris*	$ 3,530,000	$ 3,430,000	$ 3,630,000
White Pine	*Pinus strobus*	$ 2,720,000	$ 2,680,000	$ 2,750,000
Cypress	*Cupressus sp*	$ 960,000	$ 960,000	$ 960,000
White Spruce	*Picea glauca*	$ 900,000	$ 860,000	$ 940,000
Grand Fir	*Abies grandis*	$ 810,000	$ 510,000	$ 1,120,000

B. The top twenty tree species forecasted to encounter threats from known pests and pathogens, multivariate climate change and increased fire exposure. The extent of threat to each species is given as the % biomass threatened—by pests and pathogens or by climate change forecasted by 2050 for mean annual temperature, total annual precipitation and aridity—or as the % increase in the number of weeks each species is exposed to fire by 2050.

Rank	Threats from pests and pathogens		% biomass threatened	Threat from expected climate change by 2050		% biomass threatened	Expected increase in fire exposure by 2050		% increase in fire weeks
1	Sand Pine	*Pinus clausa*	67	Sand Serviceberry	*Amelanchier sanguinea*	100	Washoe Pine	*Pinus washoensis*	0.25
2	Pond Pine	*Pinus serotina*	64	Arizona Madrone	*Arbutus arizonica*	100	Foxtail Pine	*Pinus balfouriana*	0.18
3	Slash Pine	*Pinus elliottii*	41	Arizona Cypress	*Cupressus arizonica*	100	Giant Sequoia	*Sequoiadendron giganteum*	0.17
4	Longleaf Pine	*Pinus palustris*	39	Baker Cypress	*Cupressus bakeri*	100	Baker Cypress	*Cupressus bakeri*	0.16
5	White Fir	*Abies concolor*	35	Texas Ebony	*Ebenopsis ebano*	100	Western Juniper	*Juniperus occidentalis*	0.15
6	Spruce Pine	*Pinus glabra*	34	California Black Walnut	*Juglans californica*	100	Jeffrey's Pine	*Pinus jeffreyi*	0.14
7	Red Fir	*Abies magnifica*	33	Weeping Juniper	*Juniperus flaccida*	100	Red Fir	*Abies magnifica*	0.13
8	Radiata Pine	*Pinus radiata*	33	Great Leadtree	*Leucaena pulverulenta*	100	Weeping Spruce	*Picea breweriana*	0.13
9	Spruce	*Picea engelmannii*	29	Arizona Pine	*Pinus arizonica*	100	Incense Cedar	*Calocedrus decurrens*	0.13
10	Jack Pine	*Pinus banksiana*	26	Apache pine	*Pinus engelmannii*	100	Port Orford Cedar	*Chamaecyparis lawsoniana*	0.13
11	Bishop Pine	*Pinus muricata*	26	Radiata Pine	*Pinus radiata*	100	Pinyon Pine	*Pinus monophylla*	0.13
12	Norway Pine	*Pinus resinosa*	24	Engelmann Oak	*Quercus engelmannii*	100	White Alder	*Alnus rhombifolia*	0.12
13	Loblolly Pine	*Pinus taeda*	24	Chisos Oak	*Quercus graciliformis*	100	Tanoak	*Notholithocarpus densiflorus*	0.12
14	Scots Pine	*Pinus sylvestris*	23	Arizona Sycamore	*Platanus wrightii*	100	California Black Oak	*Quercus kelloggii*	0.12
15	Silver Pine	*Pinus monticola*	22	Foxtail Pine	*Pinus balfouriana*	99	Mountain Mahogany	*Cercocarpus ledifolius*	0.12
16	Shingle Oak	*Quercus imbricaria*	22	Weeping Willow	*Salix sepulcralis*	97	Sugar Pine	*Pinus lambertiana*	0.12
17	Austrian Pine	*Pinus nigra*	21	Prairie Crabapple	*Malus ioensis*	91	Northern California Walnut	*Juglans hindsii*	0.12
18	White Pine	*Pinus strobus*	20	Chinese Chestnut	*Castanea mollissima*	88	Pacific Dogwood	*Cornus nuttallii*	0.11
19	Rocky Mountain Fir	*Abies lasiocarpa*	20	Southern Blue Gum	*Eucalyptus_globulus*	84	California Torreya	*Torreya californica*	0.11
20	California Black Oak	*Quercus kelloggii*	20	Ginkgo	*Ginkgo biloba*	81	Canyon Live Oak	*Quercus chrysolepis*	0.11