

North American Regional Assessment of Forest Resources

Kotka V Expert Consultation
Kotka, Finland
June 12-16, 2006

Mark Gillis, Brad Smith, Alberto Sandoval, Harry Hirvonen and Brian Haddon

Highlights

- Background
- National Forest Inventories
- Regional Analysis and Reporting
 - Reporting Framework
 - Common Variables
 - Results – database and products
 - Issues
- Enhancing the Scope
- Outlook

Background

- Continental approach to reporting
- NAFC supports regional assessment on common issues
- NAFC Inventory, Monitoring and Assessment WG
- NAFC WG exploring reporting at a continental level
 - Aggregating NFI

Project goals

- Develop an integrated North American forest inventory database using FAO Ecological Zones
- Report on the forest resources of North America based on available information
- Establish basis for future collaboration on inventory, monitoring and assessment

NFI Canada's National Forest Inventory

Canadian Council
of Forest
Ministers

Conseil canadien
des ministres
de forêts

nfi.nfis.org

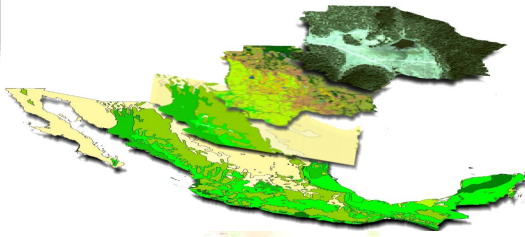


U.S. Forest Service

**Forest Inventory and Analysis
Program (FIA)**

fia.fs.fed.us

Inventario Nacional Forestal y de Suelos

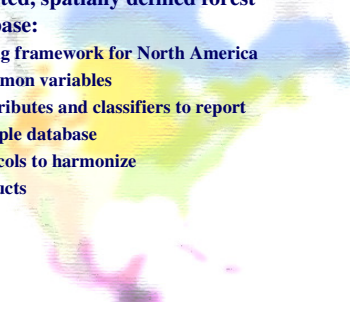


National Forest and Soil Inventory

www.conafor.gob.mx
www.cnf.gob.mx/emapas

Regional Analysis and Reporting

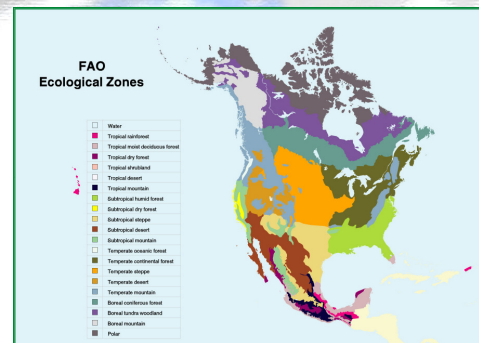
- Develop integrated, spatially defined forest inventory database:
 - Define reporting framework for North America
 - Determine common variables
 - Identify the attributes and classifiers to report
 - Generate a simple database
 - Examine protocols to harmonize
 - Generate products
 - Report



Reporting Framework for North America

- Ecological regionalization evolved over 40 years
- Refinements and more classifications in '80s and 90's
- Commission for Environmental Cooperation (CEC)
 - Develop the first comprehensive ecological regions
 - Report 'Ecological Regions of North America – Toward a Common Perspective' signed off by 3 NAFTA countries
 - Basis for final North America FAO Ecological Zones

FAO Ecological Zones for North America



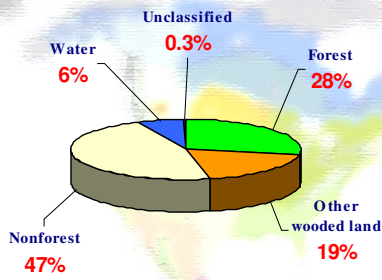
Attributes and Classifiers

- Variables:
 - Area of land
 - Ownership
 - Area and volume of forest land
 - Forest type
 - Area of other wooded land
 - Area of water

Results: Database and Products

FAO Ecological Zone	Area (000 ha)					Total
	Forest	Other wooded land	Nonforest	Water (including brackish)	Unclassified	
1	5 458	29	4 187	1 206	0	10 881
2	22 282	1 831	13 912	1 407	0	39 432
3	10 026	1 609	4 993	173	0	16 802
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	10 903	2 278	6 830	59	0	20 071
7	61 692	0	42 230	9 252	0	113 974
8	2 143	0	5 522	921	0	8 586
9	13 137	9 035	92 581	1 993	0	116 747
10	4 322	47 932	59 552	432	0	112 238
11	38 399	2 568	18 905	1 202	0	61 074
12	2 285	0	1 831	549	0	4 665
13	112 191	53 855	83 393	33 578	139	231 157
14	9 555	2 104	201 277	3 049	86	214 022
15	11 576	4 316	37 546	799	0	70 036
16	117 878	43 682	64 363	4 266	730	190 811
17	124 918	161 713	33 531	30 298	1 674	227 216
18	63 213	102 963	148 840	37 550	950	312 980
19	38 880	31 460	80 730	14 387	856	150 943
20	1 391	2 437	231 988	9 574	4 158	248 127
21	0	0	179	3 453	0	3 632
Total	679 591	466 818	1 152 850	154 342	8 592	2 152 664

North American Land Cover

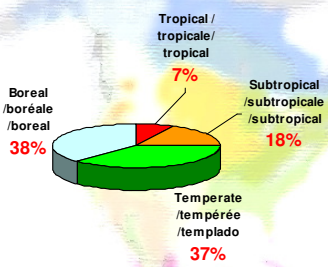


Forest Land in North America

Forest Land by FAO Ecological Zone

Percent forest	Total area 000 ha
0 - 20	760 000
21 - 40	470 000
41 - 60	860 000
> 60	200 000

North American Forests

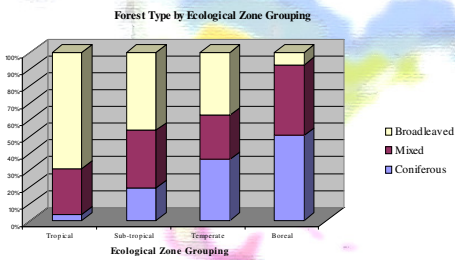


Average Wood Volumes

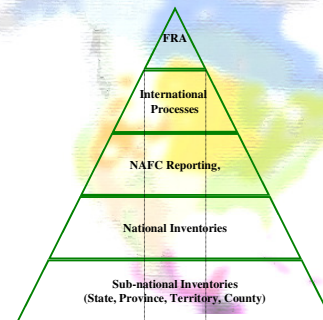
Average Wood Volume by FAO Ecological Zones

Average Wood Volume m ³ /ha	Total Volume 000 m ³	Total Forest Area 000 ha
0 - 75	6 577 799.80	100 000.00
76 - 150	30 700 000.79	307 700.00
151 - 225	21 186 973.35	120 000.00
> 225	678 008.02	2 287.00

Forest Type



Where does this product fit?



Issues

- Definitions – need for harmonization
- Common framework – not consistent with national reporting frameworks

Enhancing the Scope

- Addition of core attributes to each countries data collection to expand national reporting and facilitate expanded continental reporting
- Develop higher level spatial resolution to enhance spatial analysis and reporting

Outlook

- All three countries are revising approaches to national-scale forest inventory
 - Moving towards similar inventory protocols and core data and definitions
 - All three countries are implementing systematic sampling design
- New NFI Initiatives should provide capability to support analysis and reporting at a continental scale
- NFIs are mandated in US and Mexico
 - No compelling legislation in Canada

Outlook

- Continue to move towards a common framework for inventory and monitoring by:
 - Working with FAO to examine issues of inconsistent boundaries
 - Resolve outstanding issues with existing variables and examine additional variables that could be added to the database
 - Cooperate with other NAFC WGs to explore the value of the database for reporting on common issues

Questions?

fs.fed.us/global/nafc/inventory/activities.htm