

The Joint Wood Energy Enquiry



Working Party on Forest Economics and Statistics

29th Session, 20 - 22 March 2007, Geneva



Structure

I:

- Process and results and conclusions
- Discussion
- Countries experiences / national issues

II:

- Fundamental challenges
- Discussion

III:

- Future work / structure
- Questions and discussion



The Joint Wood Energy Enquiry

I. Looking backward:
Process, results and conclusions

by Florian Steierer

UNECE/FAO Timber Section

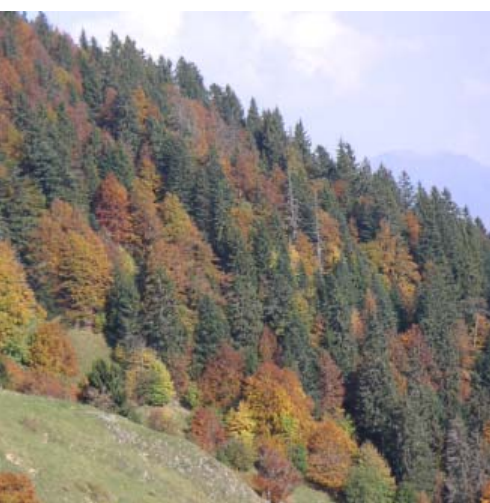
Overview

- Joint Wood Energy Enquiry
 - History and objectives
 - Process
 - Results
- Conclusions and analysis
- Discussion



History

- EFSOS: Future scenarios for all commodities except fuelwood (→ unlike ETTS IV)
- Before 2004: JFSQ only information on *woodfuel*
- 2004 assessment of available studies and data sources on national level. → *Passive data collection.*
- 2005 design of a detailed draft questionnaire sent to sample countries → *Active data collection.*
- 2006 revised detailed Joint Wood Energy Enquiry sent to all member countries.
- 2007 - ???



Objectives

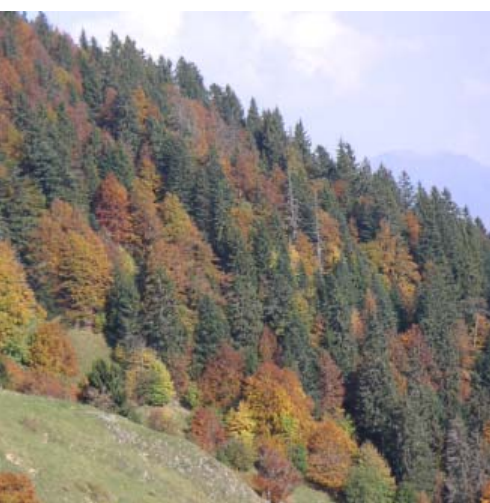


- Provide the most complete picture available on wood energy in the UNECE region
- Cover all significant wood flows for energy generation (black liquor, pellets, charcoal, etc.)
- Improve cross-sectoral cooperation with energy, waste and other sectors concerned (e.g. pellets).
- Indicate the role of wood energy in national energy supply and wood consumption.



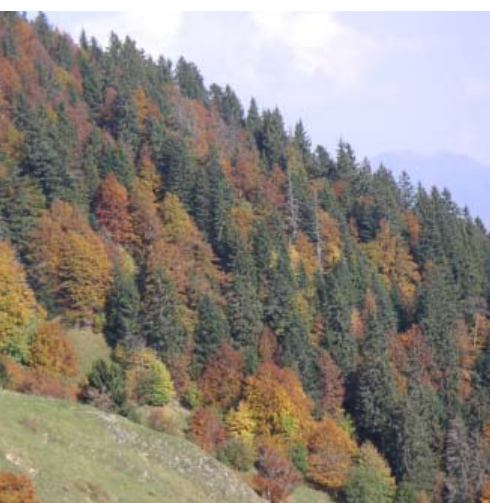
Process 2006/07

- June '06: 1st Task Group (UNECE, FAO, EU and IEA) launched the presented as “draft questionnaire” at the JWPFES 2006.
- November '06: First assessment of data replies.
- December '06: 2nd Task Group meeting in Brussels discussed data and drafted preliminary report. Presentation to industries and associations.
- February '07: Data revision process to clear questionable details in the replies.
- February '07: Final report and all data available on UNECE/FAO Timber Section website.



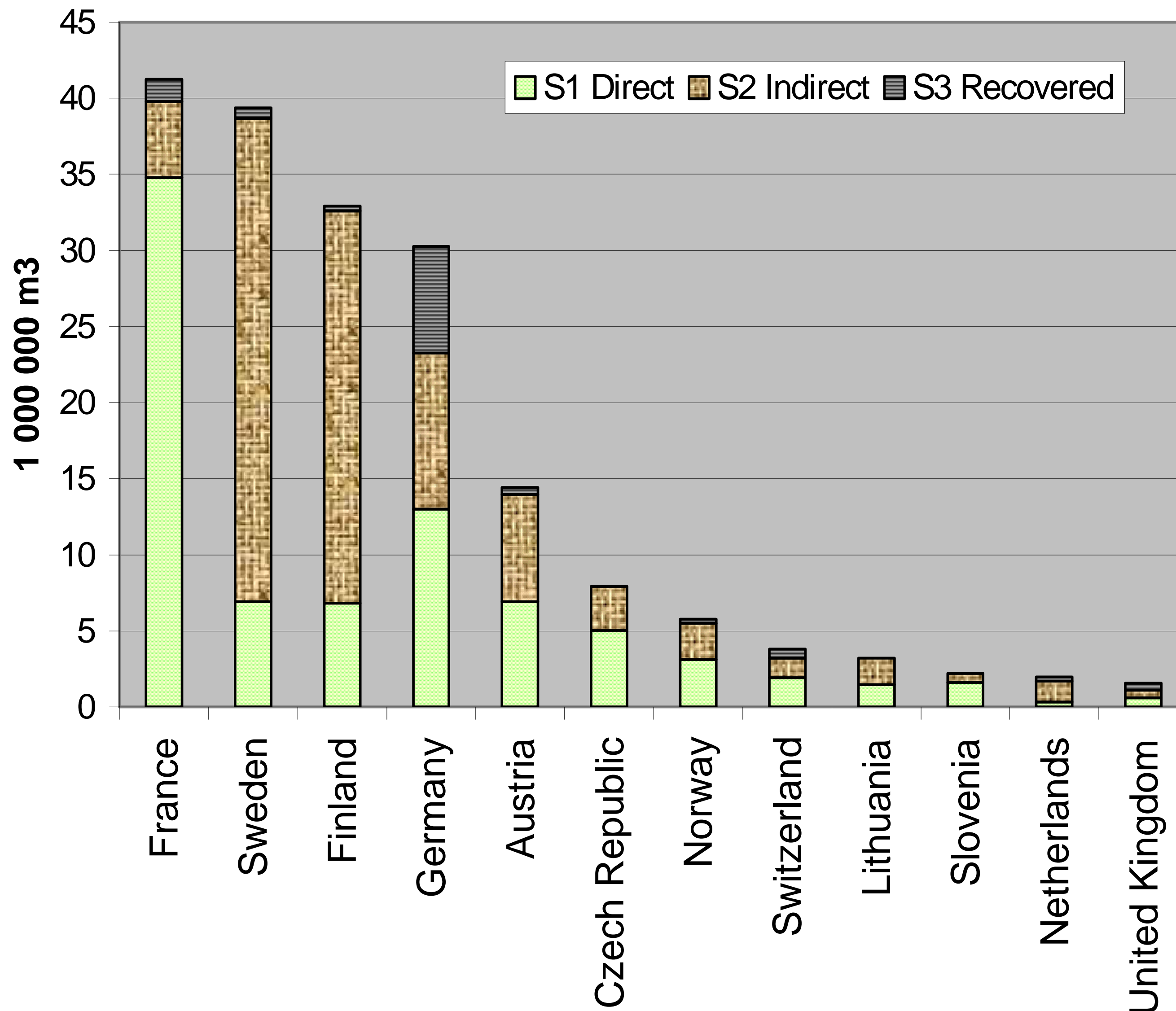
Results 2006/07

- 14 responses evaluated
- 5 more responses with not sufficient data content
- Responses cover most important markets in Europe (e.g. 63 % removals) and North America.
- Energy generation is already an important wood consumer in developed countries and future demand is expected to increase.

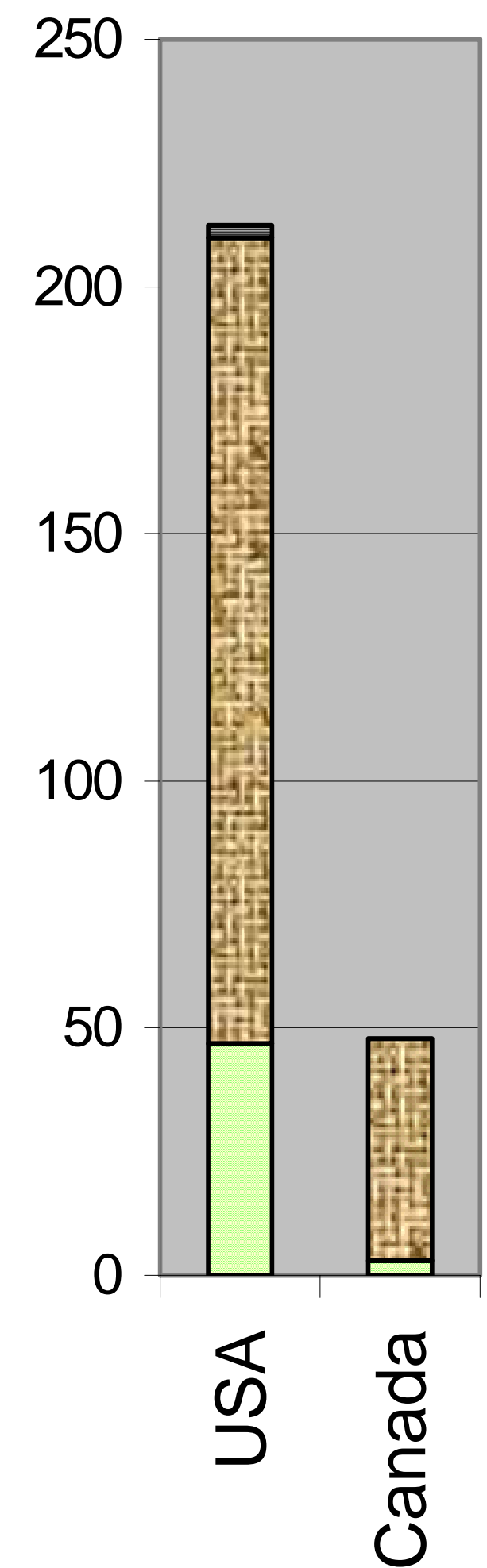


Results – Sources wood energy

Europe

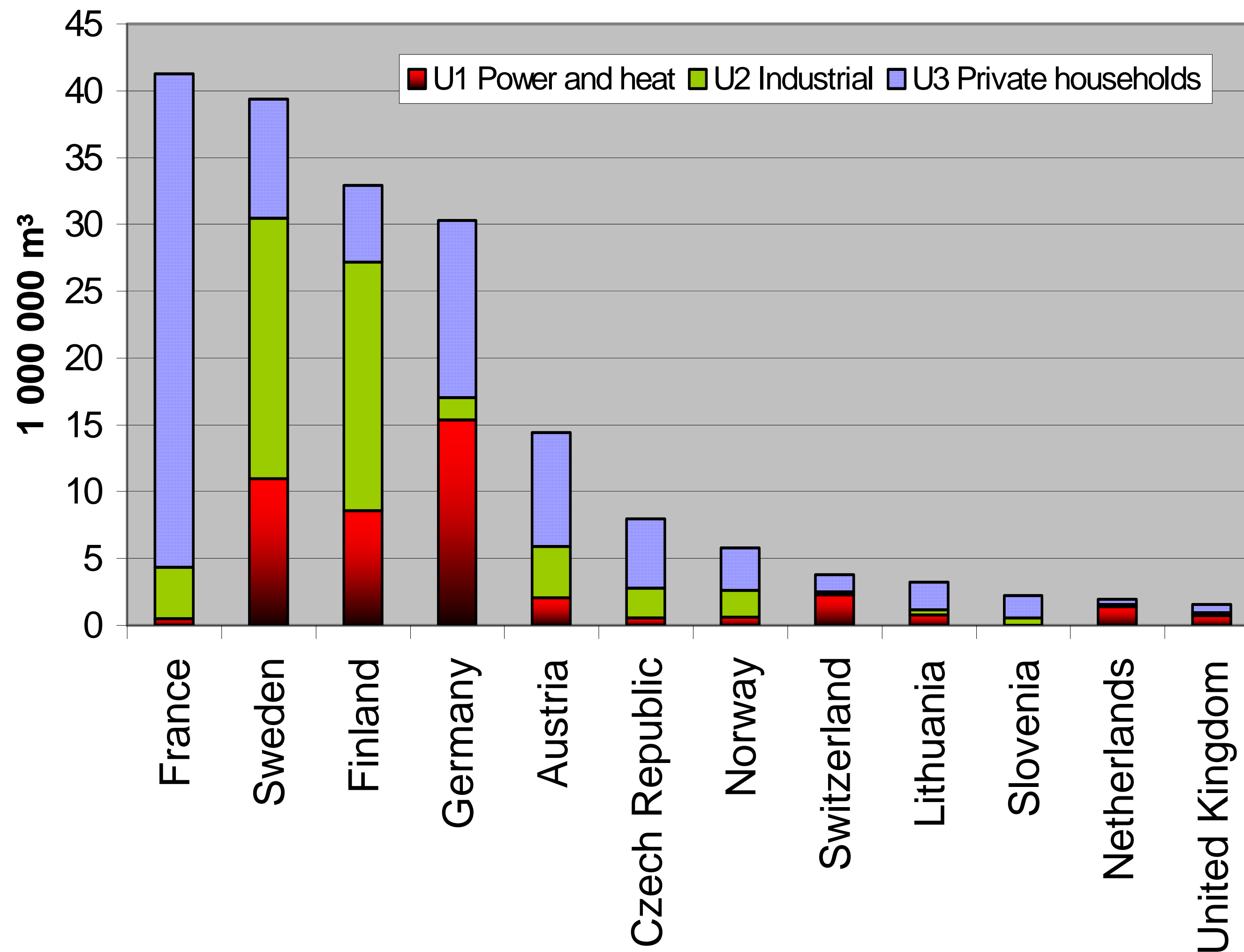


North America

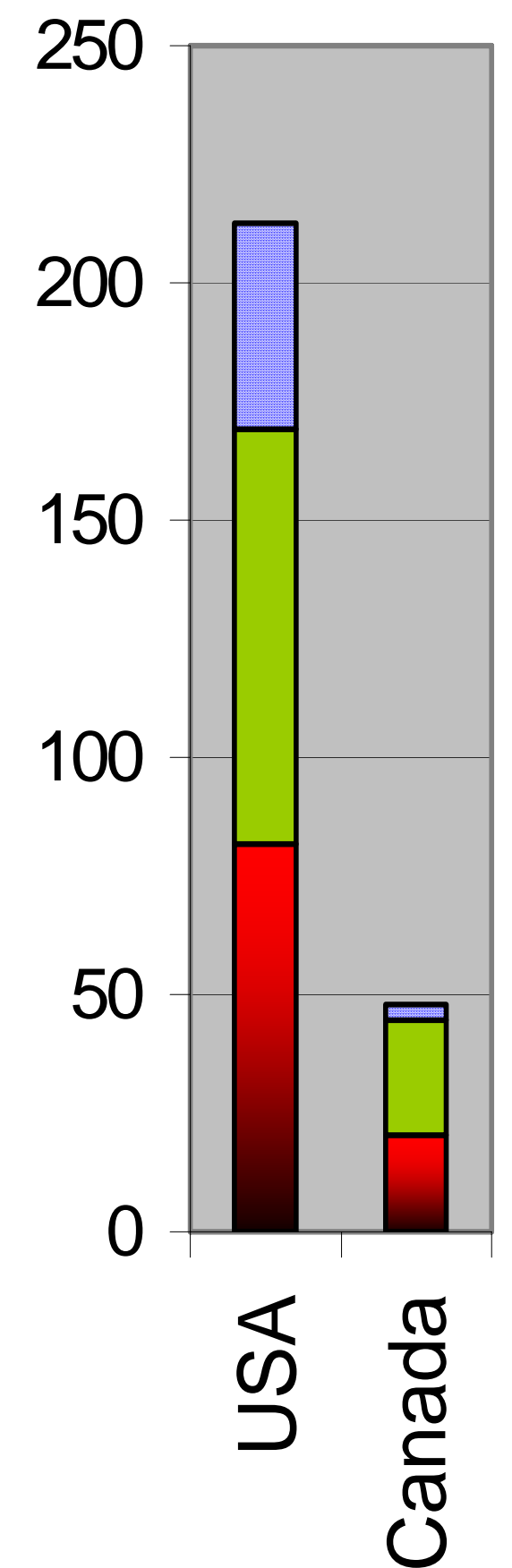


Results – User wood energy

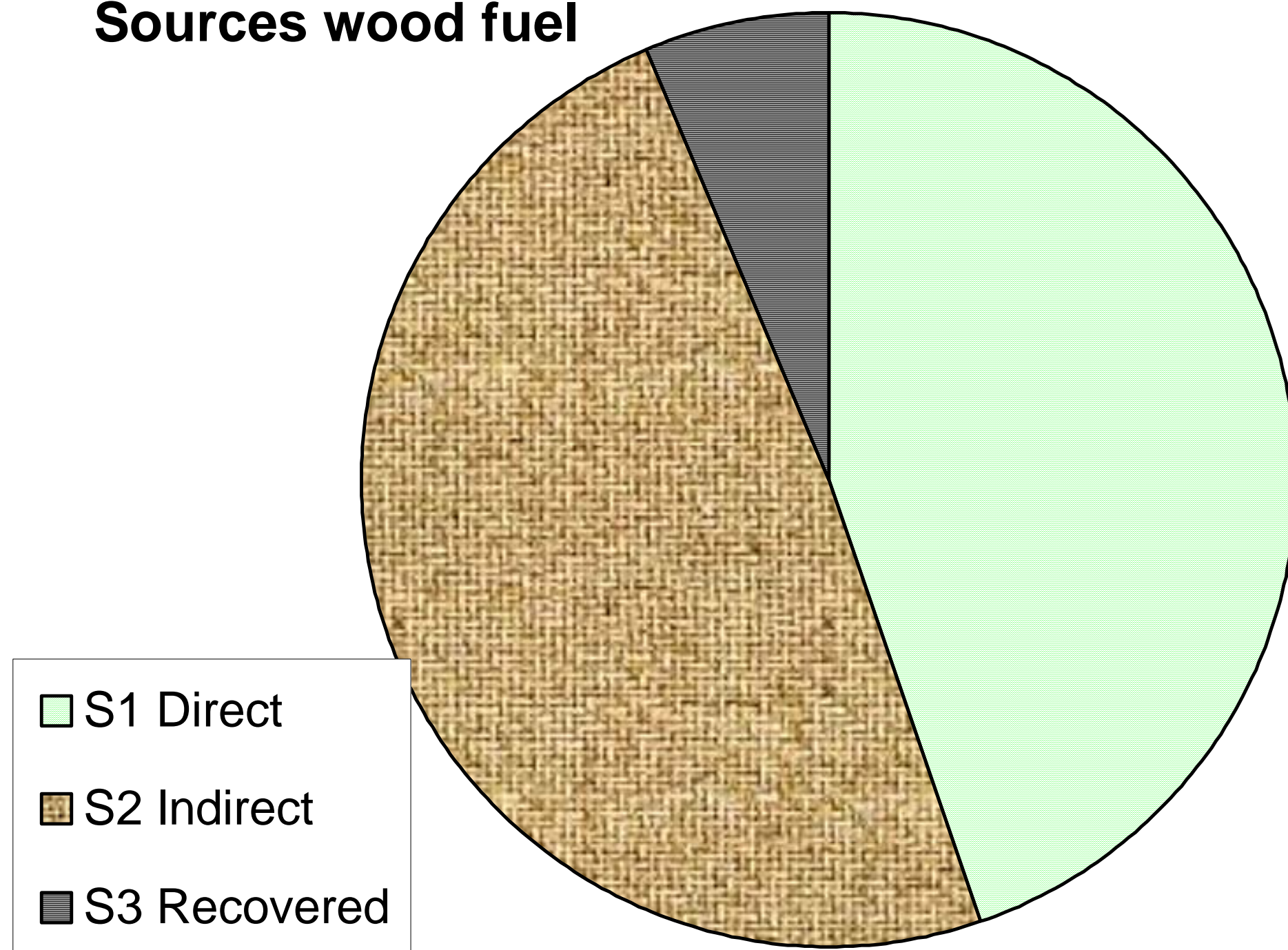
Europe



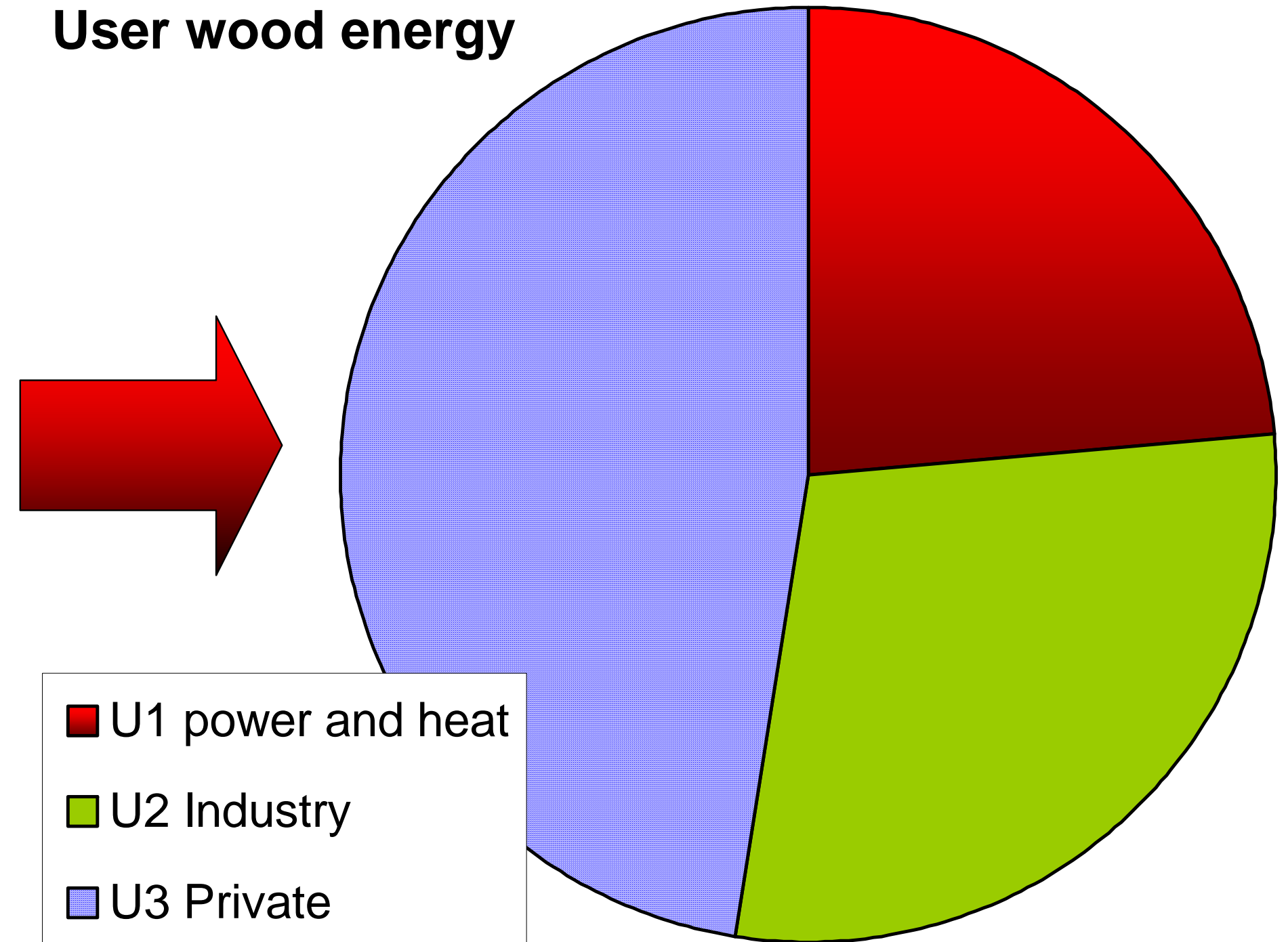
North America



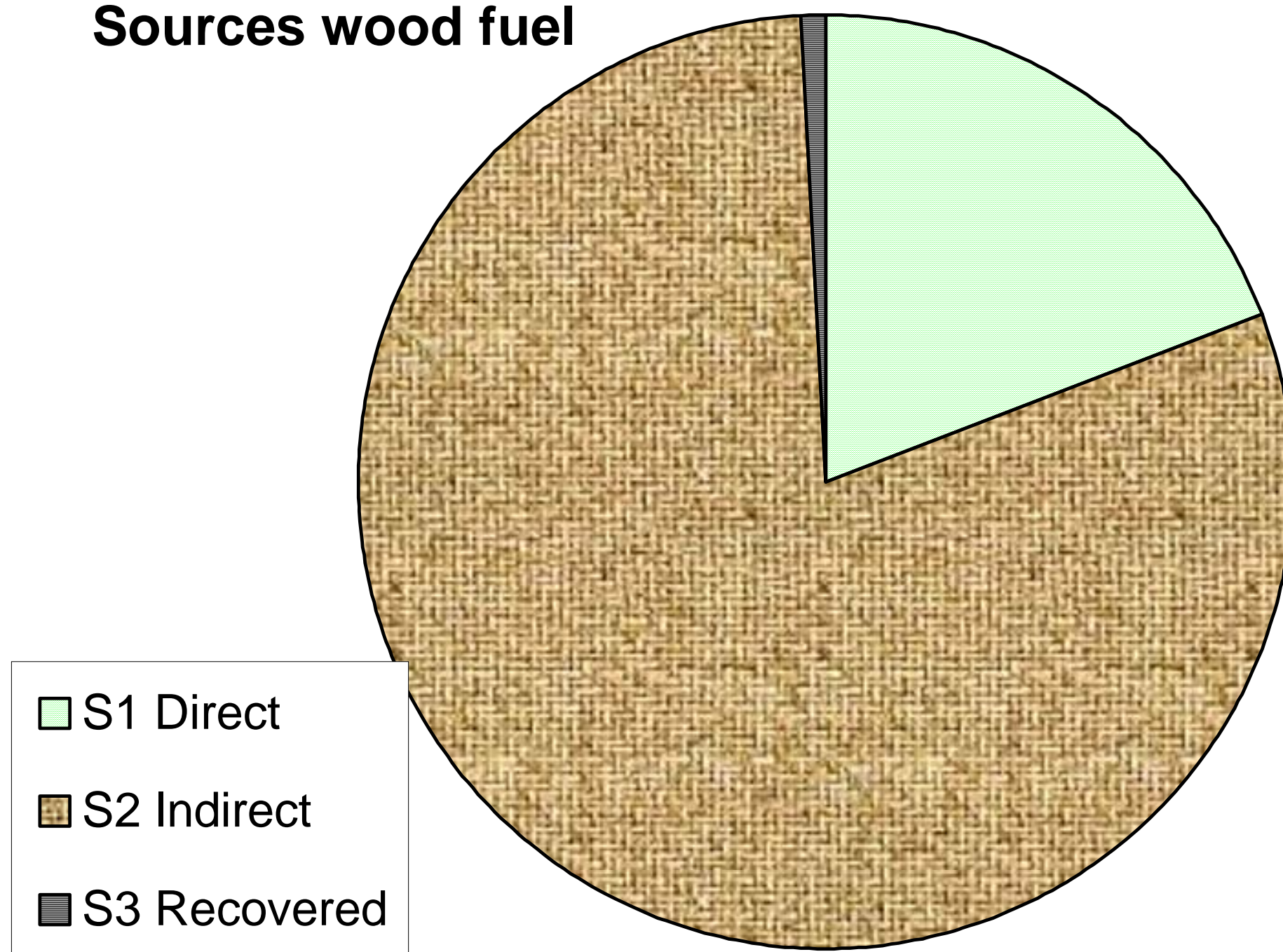
'Europe'
Sources wood fuel



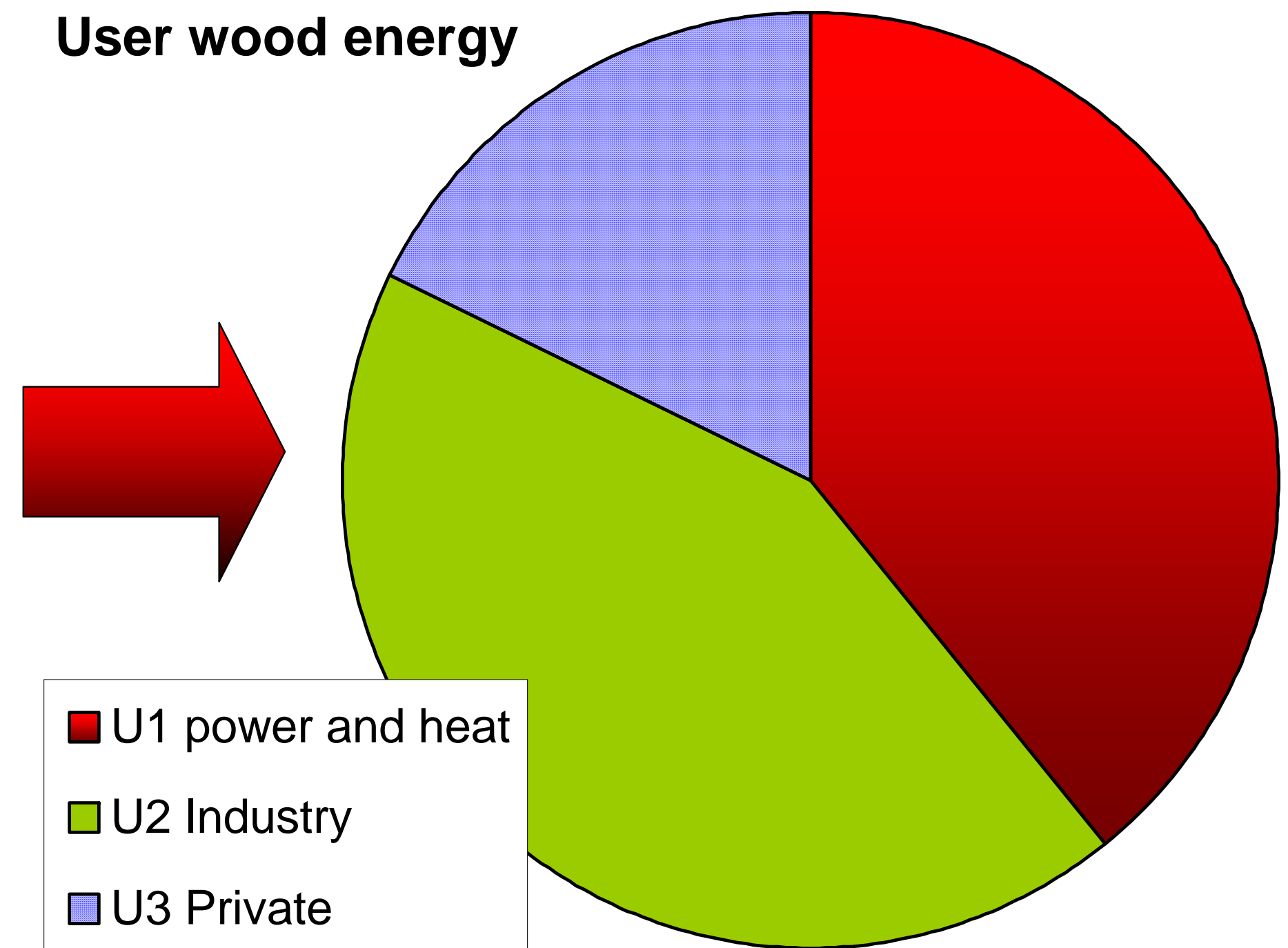
'Europe'
User wood energy



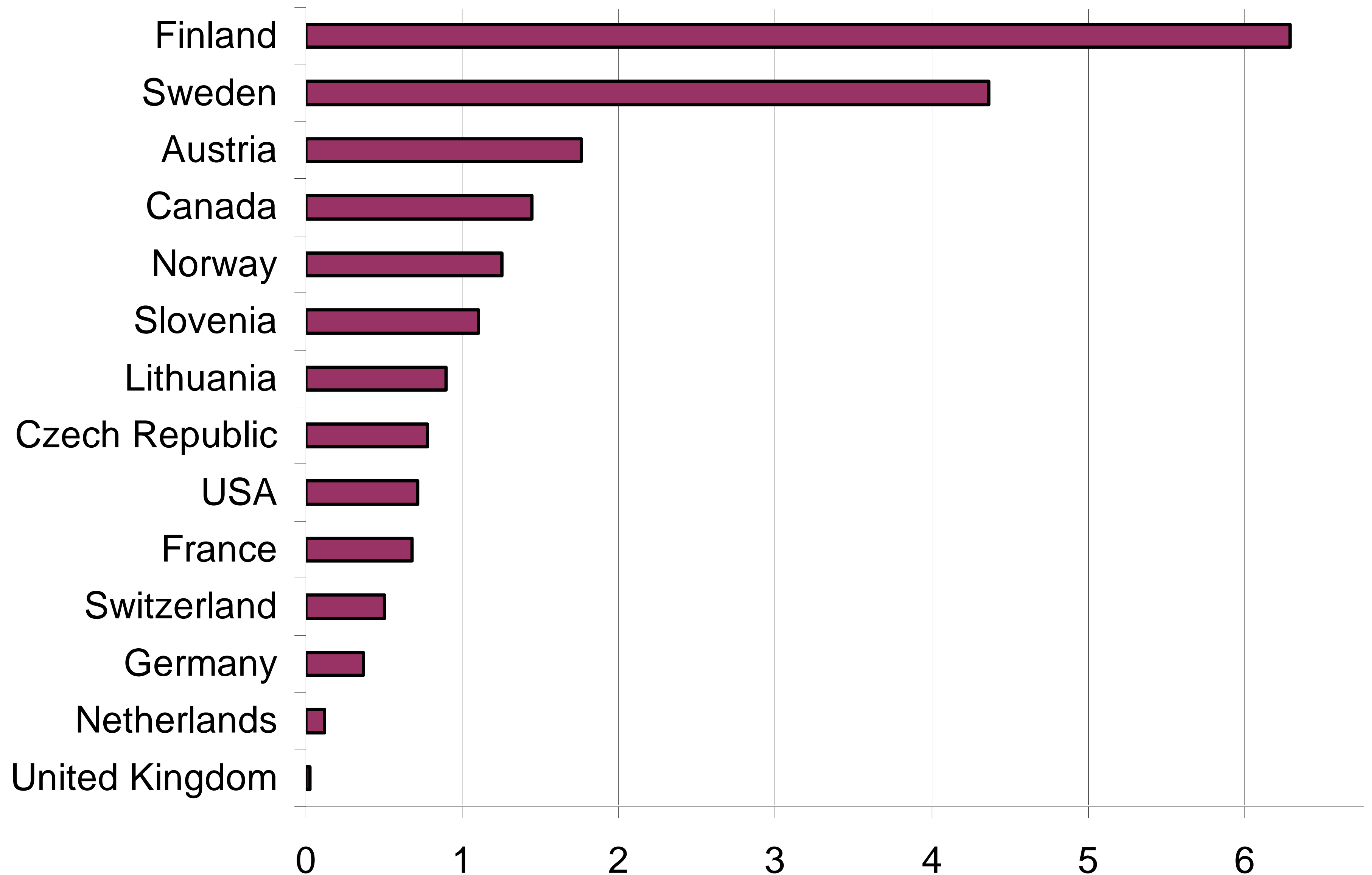
'North America'
Sources wood fuel



'North America'
User wood energy

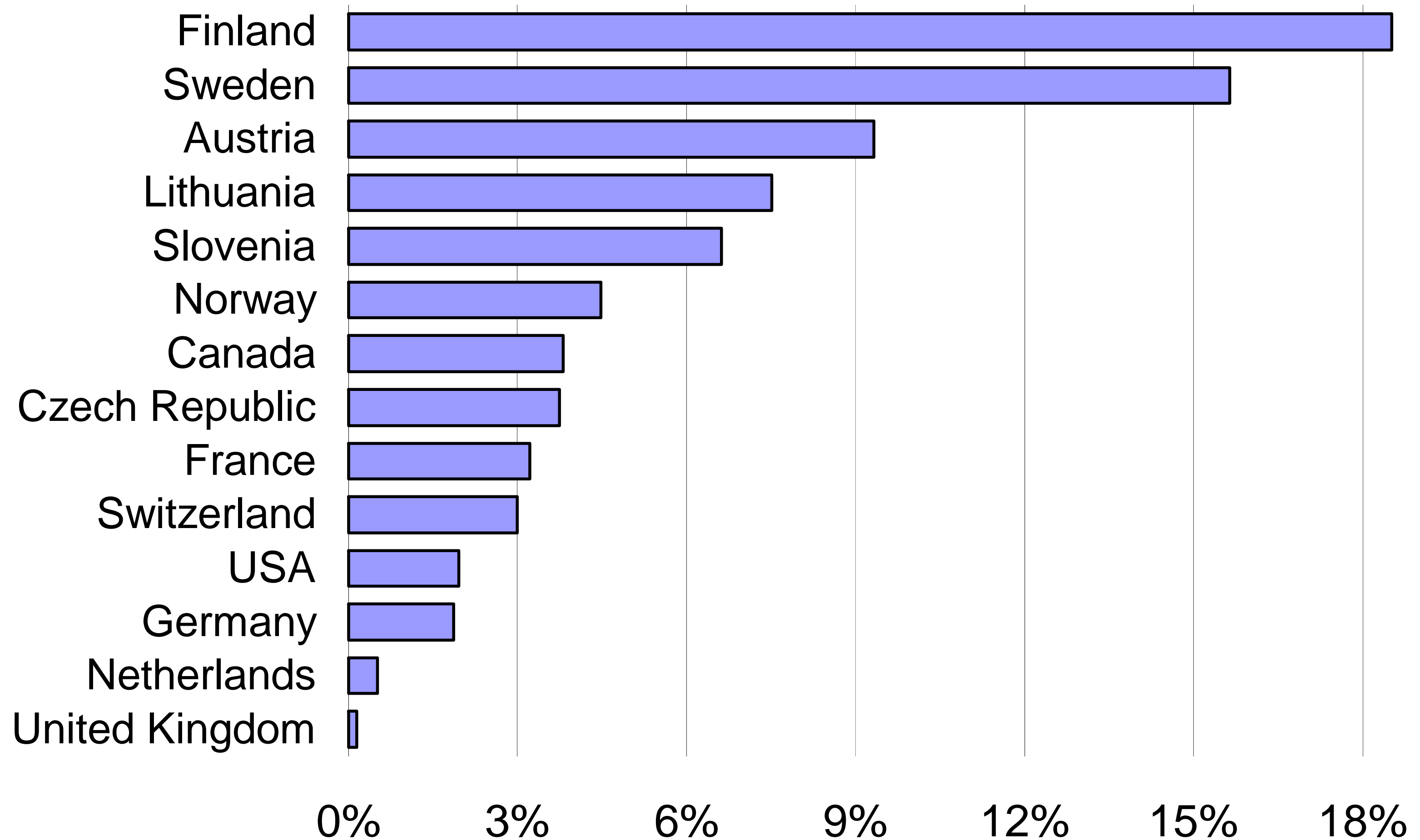


Total annual wood fuel consumption (m³ roundwood equivalent/capita)



Results

Role of wood energy in Total Primary Energy Supply



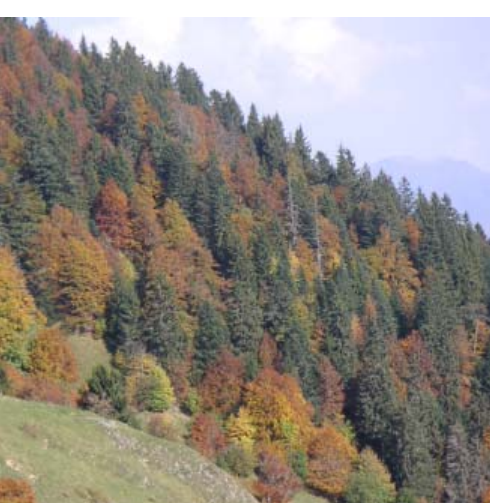
Results

- Energy is the single largest end use of wood.
- Far more wood is used than previously believed.
- Most residues are used productively
- Vast energy potential of post consumer wood

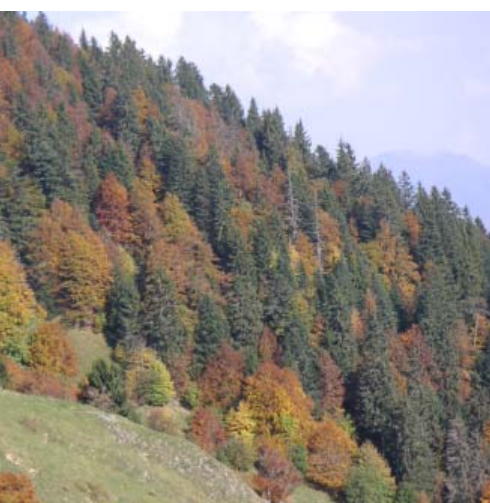


Conclusions

- Countries can provide requested information – if key person contacted (focal point)
- Comprehensive picture on wood energy supply and use
- Highly relevant data
- Cooperation between energy and forestry sector are essential



Conclusions



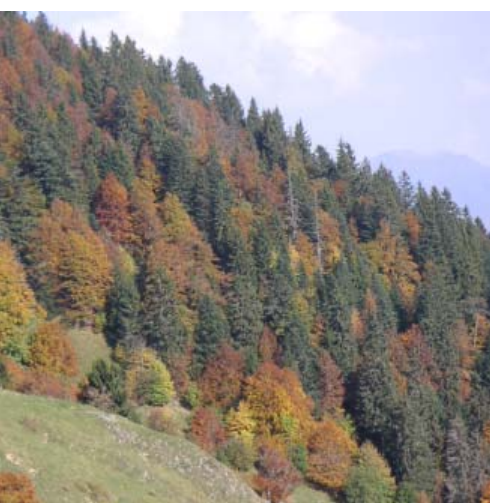
- High potential to improve data quality.



End of Part I - Discussion

Questions and comments on:

- Structure
- Process
- Results and conclusions



End of Part I - Discussion

The members of the Working Party are invited to express their opinion on the result and the methods:

- a. Comment on the JWEE process so far, including the principles and future direction*
- b. Those countries which have been able to improve their data may wish to comment on how this occurred*
- c. Review the results of the study for their own country and provide better information if possible. Non-responding countries are invited to fill in the enquiry, so that they may be covered in the published version of the study*
- d. Review the study and authorise the secretariat to revise it in light of the Working Party's comments and to publish it as an UNECE/FAO Discussion Paper*





The Joint Wood Energy Enquiry

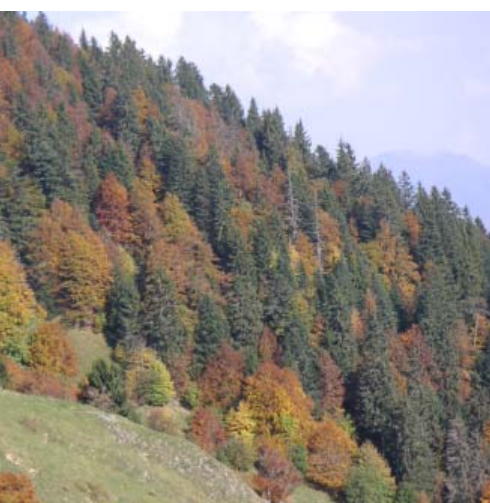
II. Fundamental Challenges

by Douglas Clark

UNECE/FAO Timber Section

YEAR: 2004/05			A	B	C	D	E	F	G	H	I	J	K	L	M				
			domestic production *)	import	export	domestic availability =A+B-C	non energy use by wood processors							wood					
							sawmill Industry	panel prod.	pulp prod.	other prod.	production of energy carriers			Wood Input 1					
											pellets	charcoal	biofuel	heat	electricity				
1	SOURCES	Industrial Roundwood	m³ [scu]	14	14	14	14	13	13	JFSQ (total roundwood) ??						1			
2		Fuelwood	m³ [scu]	14	11	12	13												2
3		Logging residues	m³ [scu]	7			7												1
4		Thinnings	m³ [scu]	3			3								1	1			
5		Short rotation energy coppice	m³ [scu]	1			2									1			
6		Primary industrial residues	m³ [scu]	14	12	11	14	1	8	7	3	5			7	4			
7		Secondary industrial residues	m³ [scu]	5	2	2	7		2		1	1			2	2			
8		Wood from urban and amenity trees	t air dry	7			6								1	1			
9		Post consumer recovered	t air dry	11	1		9		2		3	1			2	4			
10		Bark	m³ [bv]	11	2	4	10		3		4	1			4	3			
11		Charcoal	t	10	11	11	11												
12		Pellets	t	13	8	8	12								2	1			
13		Black liquor	PJ																
			A	B	C	D	E	F	G	H	I	J	K	L	M				

Total roundwood consumption data: JWEE vs. JFSQ



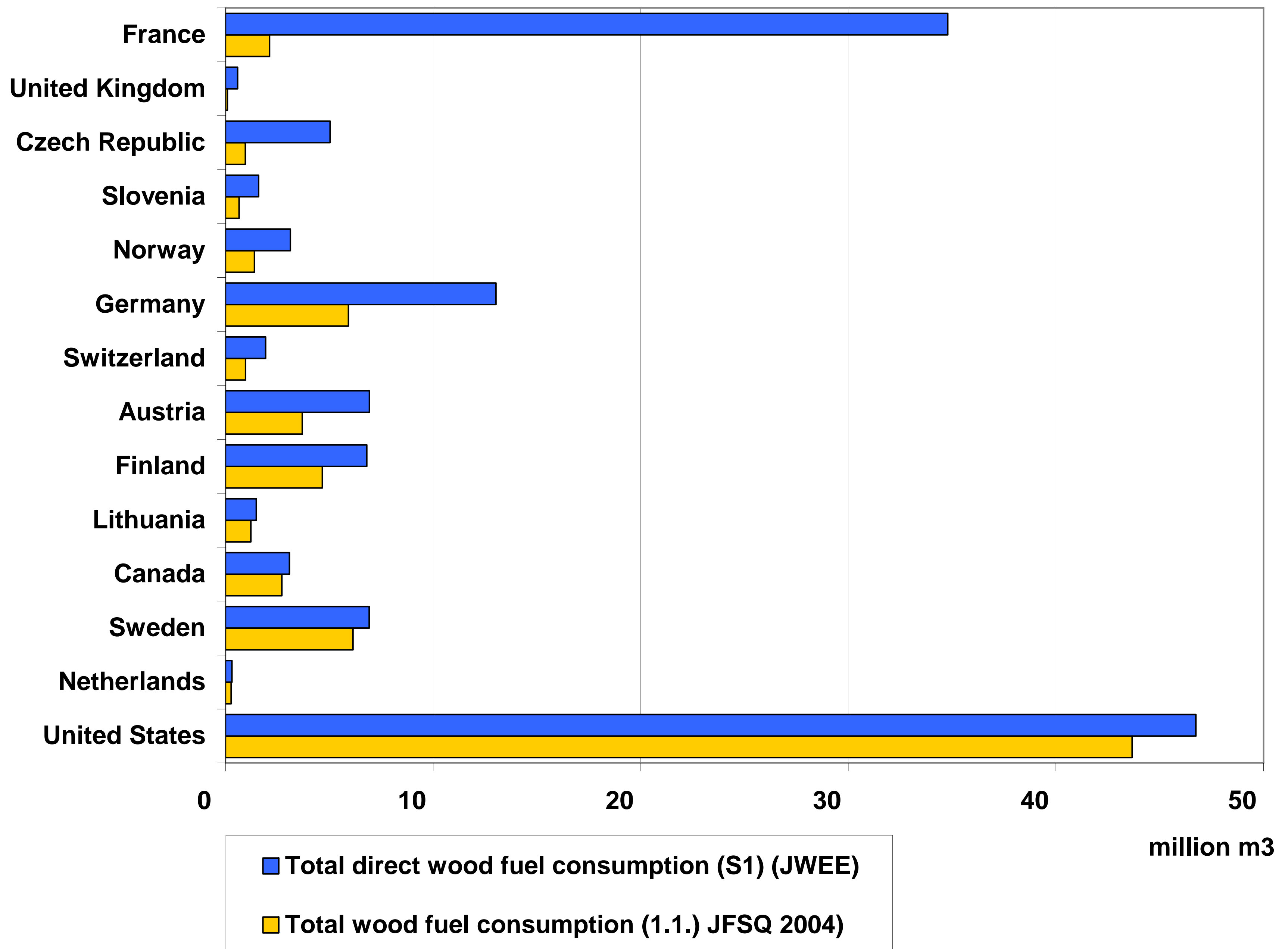
- Seven countries within 15 % variation
- Three countries 15-30 % higher consumption in JWEE
- Three countries reported 30-50% higher roundwood consumption in JWEE
- One country reported over 100% more roundwood consumption in JWEE



YEAR: 2004/05			A	B	C	D	E	F	G	H	I	J	K	L	M
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3		Logging residues	m³ [scu]	7			7							3	1
4		Thinnings	m³ [scu]	3			3							1	1
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7		Secondary industrial residues	m³ [scu]	5	2	2	7		2		1	1		2	2
8		Wood from urban and amenity trees	t air dry	7			6							1	1
9		Post consumer recovered	t air dry	11	1		9		2		3	1		2	4
10		Bark	m³ [bv]	11	2	4	10		3		4	1		4	3
11		Charcoal	t	10	11	11	11								
12		Pellets	t	13	8	8	12							2	1
13		Black liquor	PJ												
			A	B	C	D	E	F	G	H	I	J	K	L	M

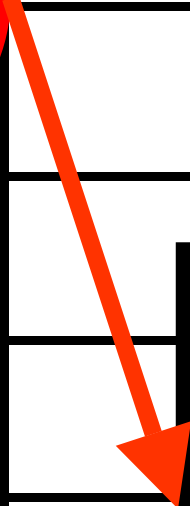
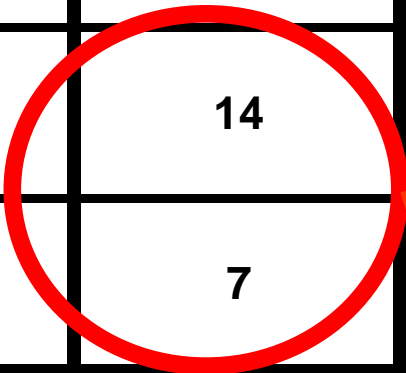
JFSQ
(wood fuel) ??

Wood fuel data comparison



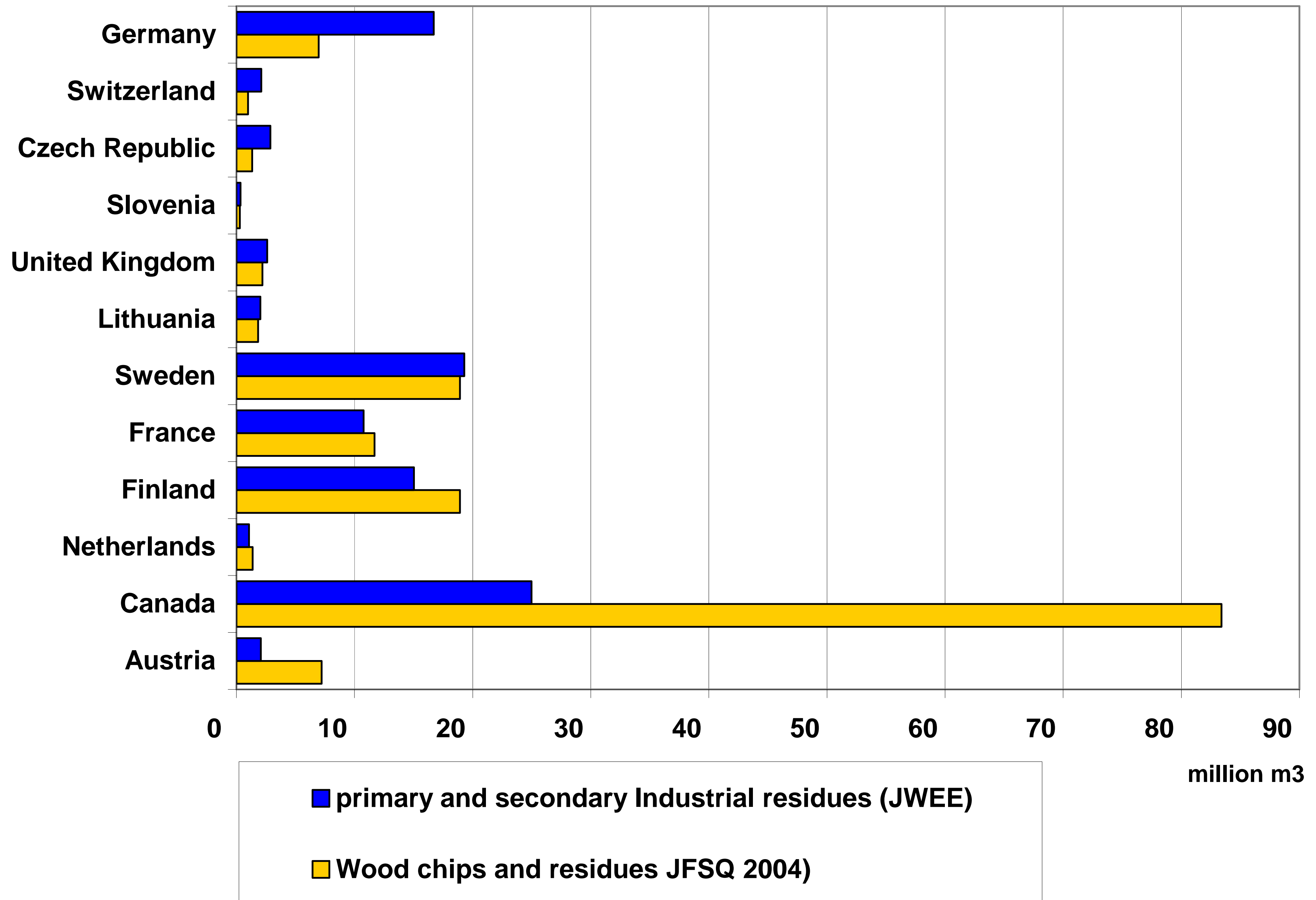
YEAR: 2004/05			A	B	C	D	E	F	G	H	I	J	K	L	M			
			domestic production *)	import	export	domestic availability =A+B-C	non energy use by wood processors										wood	
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1	Industrial Roundwood	m³ [scu]	14	14	14	14	13	13	13	11	1				1			
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12	Pellets	t	13	8	8	12								2	1			
13	Black liquor	PJ																
			A	B	C	D	E	F	G	H	I	J	K	L	M			

JFSQ
(chips particles and residues)??



JFSQ
(chips particles and residues)??

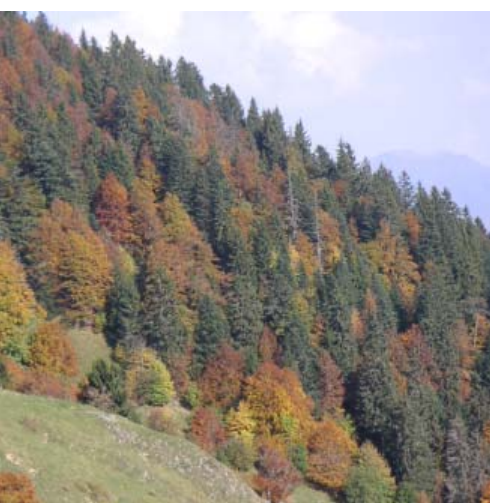
Chips and particles comparison



Comparing JWEE and JFSQ data

DISCUSSION

- What have been the main causes of the differences between the JFSQ and JWEE data?
- How can we achieve a closer match between the figures in future?





The Joint Wood Energy Enquiry

III. Looking forward: Possible future steps

by Florian Steierer

UNECE/FAO Timber Section

Future activities

The results are simply a *fuzzy snapshot*.

- Important countries are missing
- No trend assessment possible
- No outlook on future wood energy market developments

➔ Such information would need a second study.



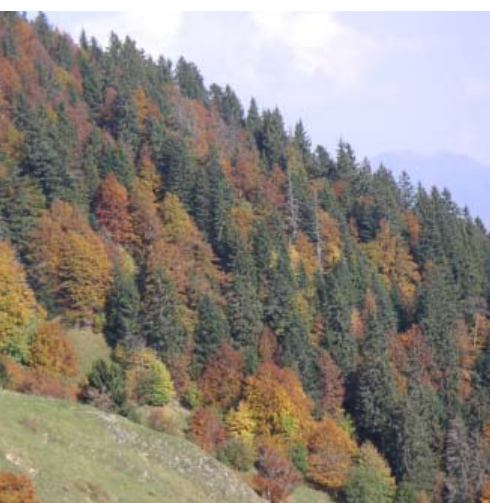
Future activities

- Learn from experience made
- Improve enquiry structure



Future activities

- Improvements to be made:
 - Distinguish fibre sources and types.
 - Separate physical wood use from energy use
 - Enhance cooperation with energy specialists
 - Complementary table with energy data/units
 - Built-in consistency checks
 - Agreed conversion factors (wood to energy units)



Future activities

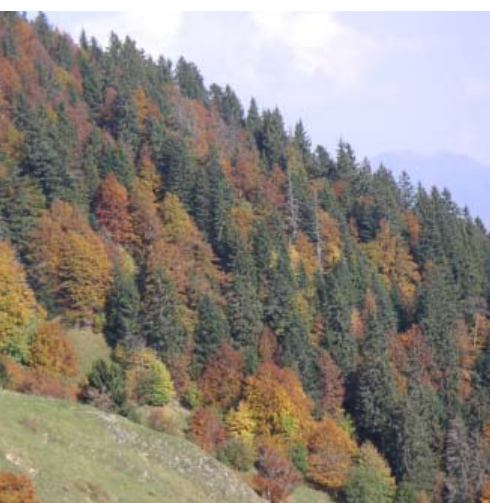


- The redrafted enquiry structure



The way forward

- The redrafted enquiry should form the basis for the next round
- Repeat enquiry (every two years ?)
- Increase contacts with other organizations, other data sources, and increase pre-filling.



The way forward



- The asset of the process is the direct contact with countries' specialists.



...but



- Examples from member countries show that empiric work can lead to substantial improvements of data quality.



End of Part III - Discussion

The members of the Working Party are invited to express their opinion on the result and the methods:

- e. Review the proposed revised version of the JWEE and agree that it be used again in 2008 (data for 2007), using the same correspondents (requesting active participation of IEA and other energy sector experts)*
- f. Consider whether improvement of information on wood energy should be a priority activity of ECE/FAO in 2008-2012 (period of the forthcoming strategic review), and if so, what should be the main direction of activities.*
- g. Urge all countries to improve their capacity to measure and monitor the use of wood for energy, as reliable data on this are essential for policy making on energy, climate change and forests (international data collection cannot replace sound national systems)*



