

RESULTS:

Renewable Resources



Sustainable Future

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RESULTS

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1. Summary of results

- summary of 2.- 5.

2. Renewables & cross-sectoral contributions: "TIPS" for policymakers

- group work

3. Natural resource framework and arguments

- participants' opinion survey

4. Natural resource strategies and policies

- participants' opinion survey

5. Facts and trends

- participants' knowledge survey

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SUMMARY OF RESULTS

Summary of Results: Renewables Contributing to European Competitiveness and Sustainability

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ADVANTAGES

Traditions,
environmental awareness,
public acceptancy

Efficiency

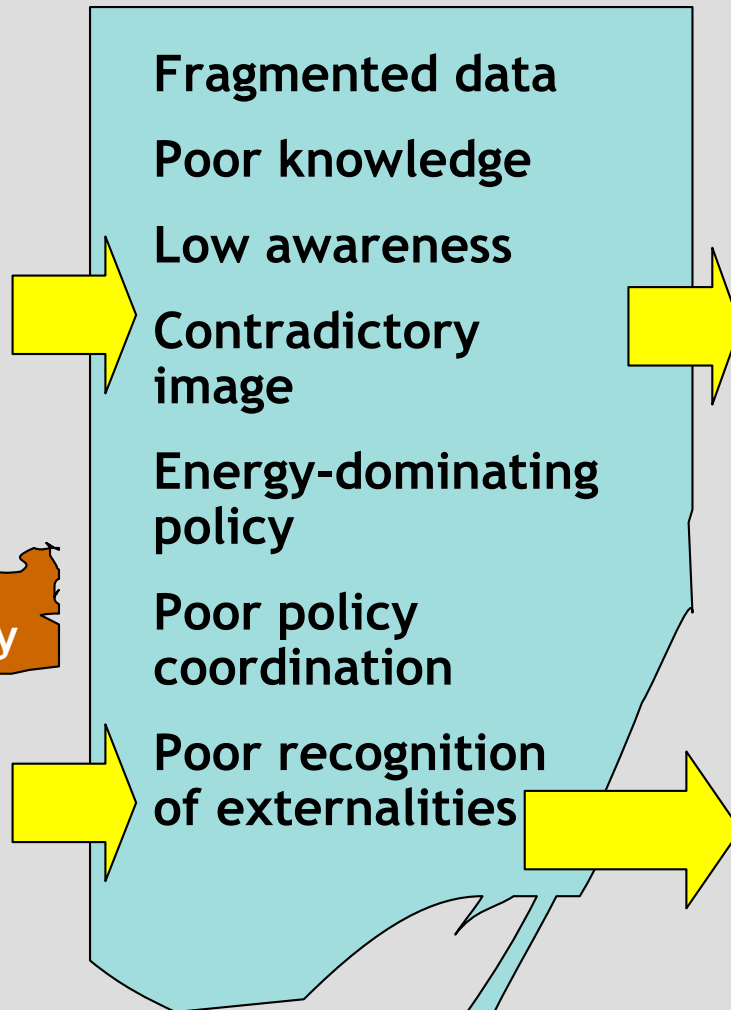
Resource
availability

Multiple
potentials
and uses

Global
responsibility

Existing expertise and
new innovation potential

CHALLENGES



ACTION

KNOWLEDGE
- Synthesis
- R&D funds
- Global panel

AWARENESS
- Decision-maker
dialogue
- Young people
- Examples

POLICY FOCUS
- Coordination
- Origin of raw
materials
- Prices right

Summary of Results: Additional highlights

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Decision-makers know surprisingly little about facts and trends in the utilisation of natural resources in Europe.

Markets alone will not take care of resource problems, policy intervention is necessary.

The participants had an extremely unanimous view that the origin of raw materials should be taken more seriously in European policies.

The growth potentials of European forests are not fully recognised.

The amount of wood used for industrial products vs. energy is overestimated.

Bioenergy potentials are considered higher than realistic.

Price trends of fossil fuels are well-known but there is little awareness of the price trends in non-renewable materials.

The Forest Based Industries vision for 2030 is considered rather realistic.

There is little awareness of the high and growing level of dependency on imported non-renewable raw materials (e.g. metals and minerals)

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RENEWABLES & CROSS-SECTORAL CONTRIBUTIONS: "TIPS" for policymakers (Group work)

A. RENEWABLES & COMPETITIVENESS



What are the competitive advantages of renewable natural resources in Europe?

- Traditions, image and environmental awareness (17)
- Expertise and innovation (11)
- Resource availability (4)
- Potential for multiple simultaneous uses (-)

(In priority order, number of votes in parenthesis)

Note:

For detailed report on the group work results, see www.smy.fi/renewableresources

B. RENWEABLES & SUSTAINABILITY



What advantages (+) and disadvantages (-) do renewable natural resources have in contributing to sustainable development in Europe?

- Availability and locality (+23 / -1)
- Environmental impacts (+1 / -3)
- Cost and efficiency (+1 / -1)
- Global responsibility (-1)
- Other (+1)

(In priority order, number of votes in parenthesis)

Note:

For detailed report on the group work results, see www.smy.fi/renewableresources

C. RENEWABLES & CASE FOREST



What are the main challenges of the forest sector in promoting the use of wood?

- Communication and awareness building (16)
- Policy coordination (10)
- Cost structure and externalities (4)
- Global sustainability promotion (2)
- Information (-)

(In priority order, number of votes in parenthesis)

Note:

For detailed report on the group work results, see www.smy.fi/renewableresources

D. RENEWABLES & POLICIES



What are the bottlenecks in global or regional policy trends that discourage the utilisation of the potentials of renewable natural resources?

- Short term business view (16)
- Costs and externalities (11)
- Cross-sectoral coordination and consensus building (5)
- Information and knowledge (3)
- Image (3)
- Sectoral fragmentation (2)

Note:

For detailed report on the group work results, see www.smy.fi/renewableresources

(In priority order, number of votes in parenthesis)

E. RENEWABLE & INFORMATION



What steps should be taken to increase natural resources information and knowledge in Europe?

- Synthesis of fragmented data (14)
- Focus group: young people (7)
- Media coverage (5)
- Information and knowledge (3)
- Benchmarking (3)

(In priority order, number of votes in parenthesis)

Note:

For detailed report on the group work results, see www.smy.fi/renewableresources

F. RENEWABLES & DIALOGUE



What steps should be taken to increase cross-sectoral dialogue and coordination of natural resources in Europe?

- Cross-sectoral international decision-maker dialogue (20)
- Policy coordination (7)
- Present examples (3)
- Interdisciplinary and cross-sectoral research (2)

(In priority order, number of votes in parenthesis)

Note:

For detailed report on the group work results, see www.smy.fi/renewableresources

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NATURAL RESOURCE FRAMEWORK AND ARGUMENTS

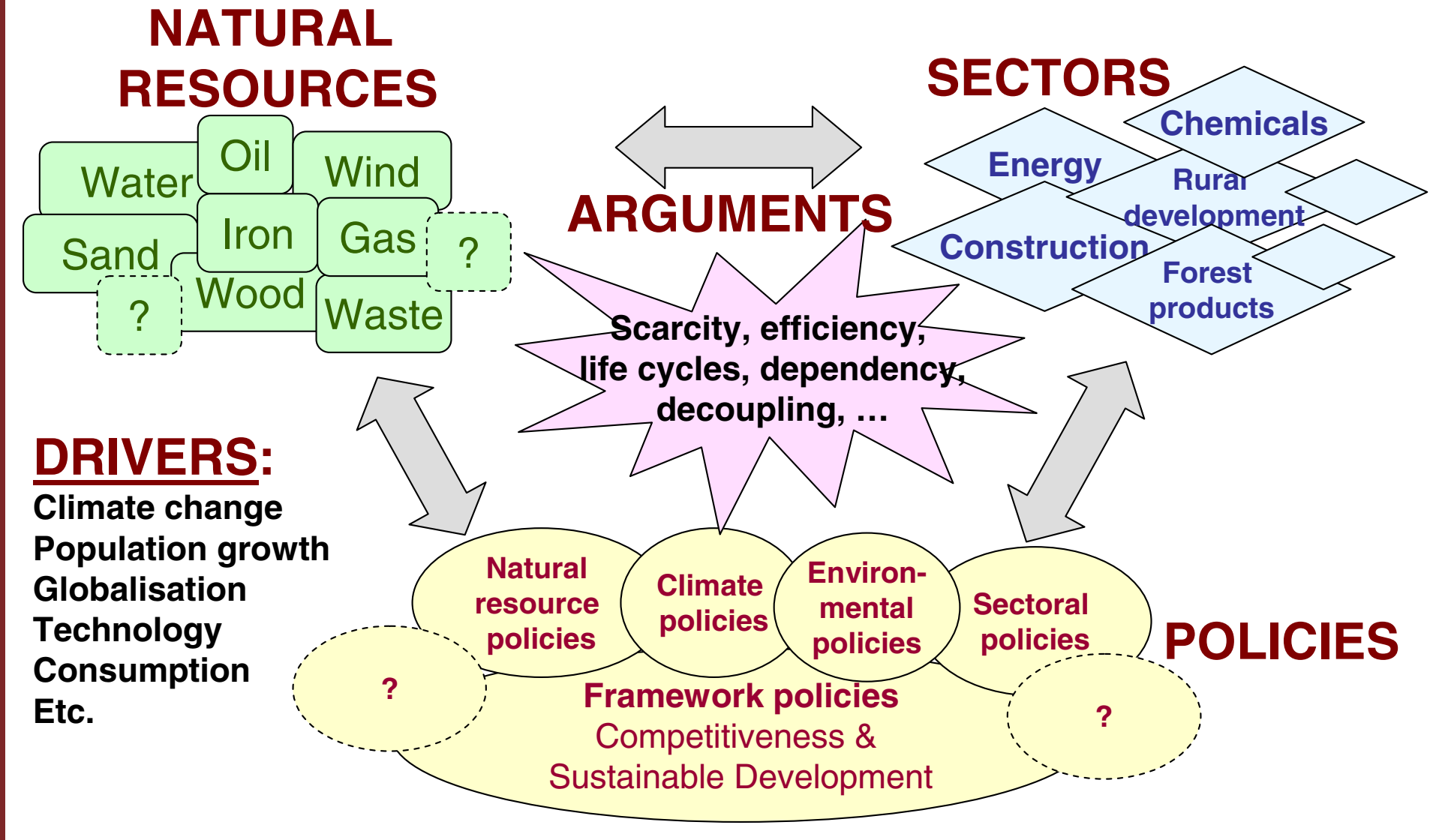
(Participants' opinion survey)

A. FRAMEWORK

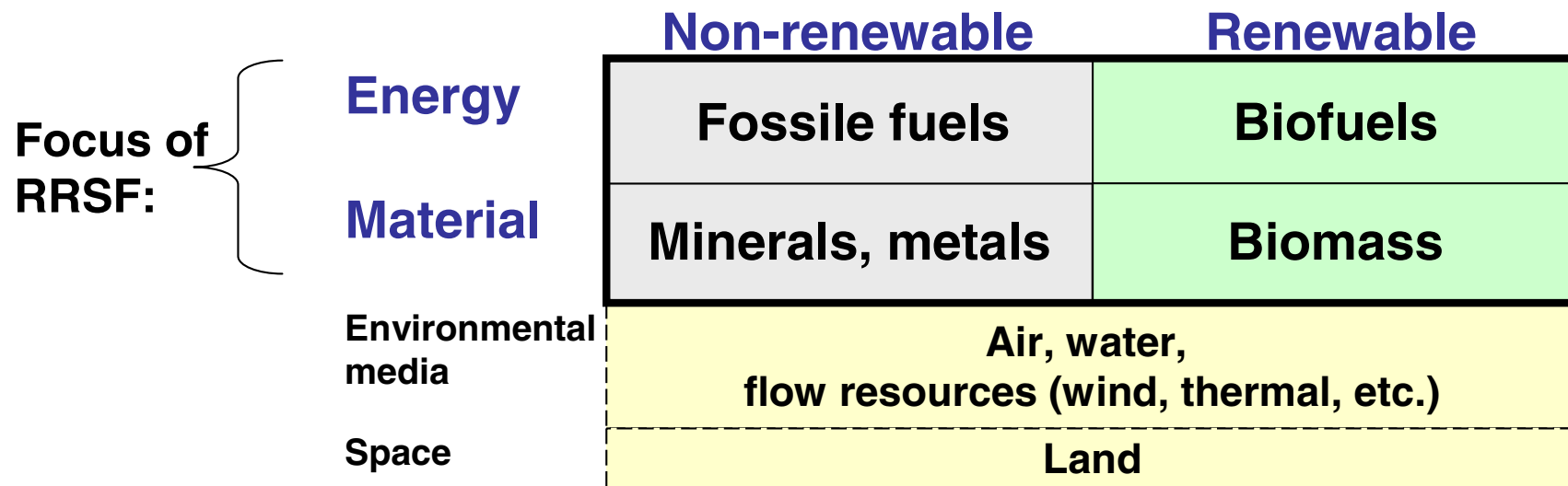
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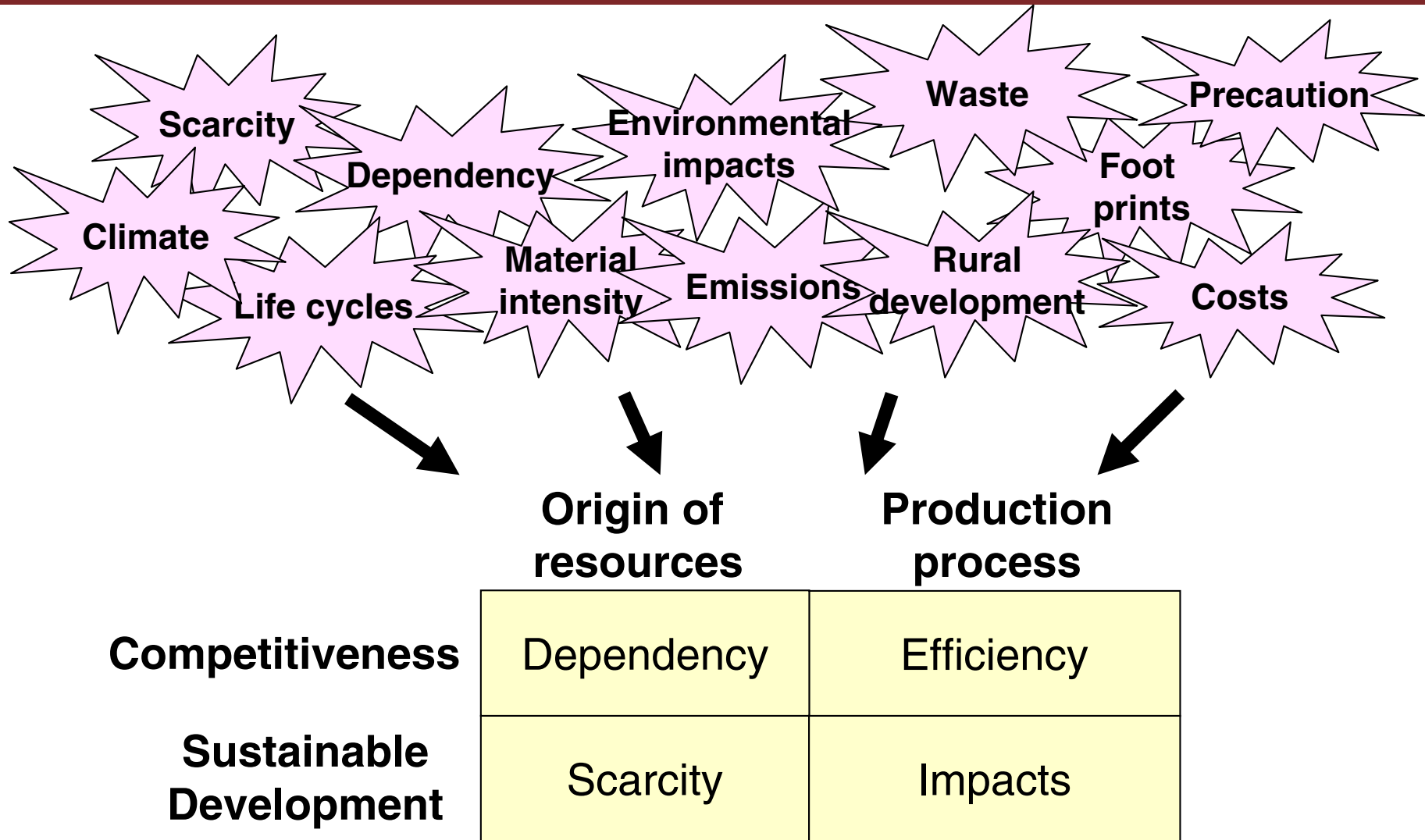


B. Grouping of Natural Resources



- **Renewable**
 - Capability of being replaced by natural ecological cycles or sound management practices
 - Sustainable only when reproduction capability is sustained !
- **Non-renewable**
 - Natural regeneration cycle is extremely long
 - Practically "finite" and "irreversible"

C. Grouping of Resource Arguments



Results of the participants' opinion survey:

D. How do different arguments support the use of different types of natural resources ?

	Resources	Processes												
Competitiveness	Independency ("security of supply") <table border="1"> <tr> <td>Fossile fuels</td> <td>Biofuels</td> </tr> <tr> <td>Metals, minerals</td> <td>Biomass</td> </tr> </table>	Fossile fuels	Biofuels	Metals, minerals	Biomass	Efficiency <table border="1"> <tr> <td>Fossile fuels</td> <td>Biofuels</td> </tr> <tr> <td>Metals, minerals</td> <td>Biomass</td> </tr> </table>	Fossile fuels	Biofuels	Metals, minerals	Biomass	<table border="1"> <tr> <td>Encourages</td> </tr> <tr> <td>Uncertain</td> </tr> <tr> <td>Discourages</td> </tr> </table>	Encourages	Uncertain	Discourages
	Fossile fuels	Biofuels												
Metals, minerals	Biomass													
Fossile fuels	Biofuels													
Metals, minerals	Biomass													
Encourages														
Uncertain														
Discourages														
Sust. Dev.	Availability ("plentiful") <table border="1"> <tr> <td>Fossile fuels</td> <td>Biofuels</td> </tr> <tr> <td>Metals, minerals</td> <td>Biomass</td> </tr> </table>	Fossile fuels	Biofuels	Metals, minerals	Biomass	Impacts <table border="1"> <tr> <td>Fossile fuels</td> <td>Biofuels</td> </tr> <tr> <td>Metals, minerals</td> <td>Biomass</td> </tr> </table>	Fossile fuels	Biofuels	Metals, minerals	Biomass				
Fossile fuels	Biofuels													
Metals, minerals	Biomass													
Fossile fuels	Biofuels													
Metals, minerals	Biomass													

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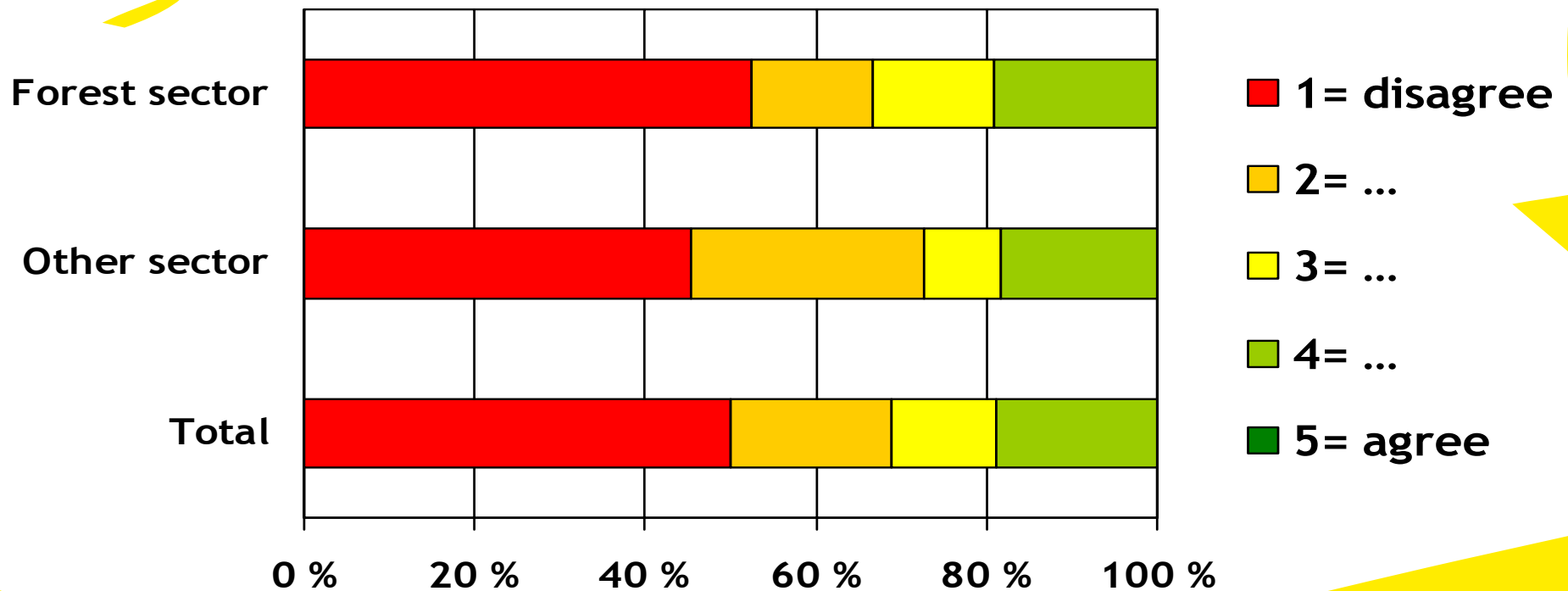


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NATURAL RESOURCE STRA- TEGIES AND POLICIES (Participants' opinion survey)

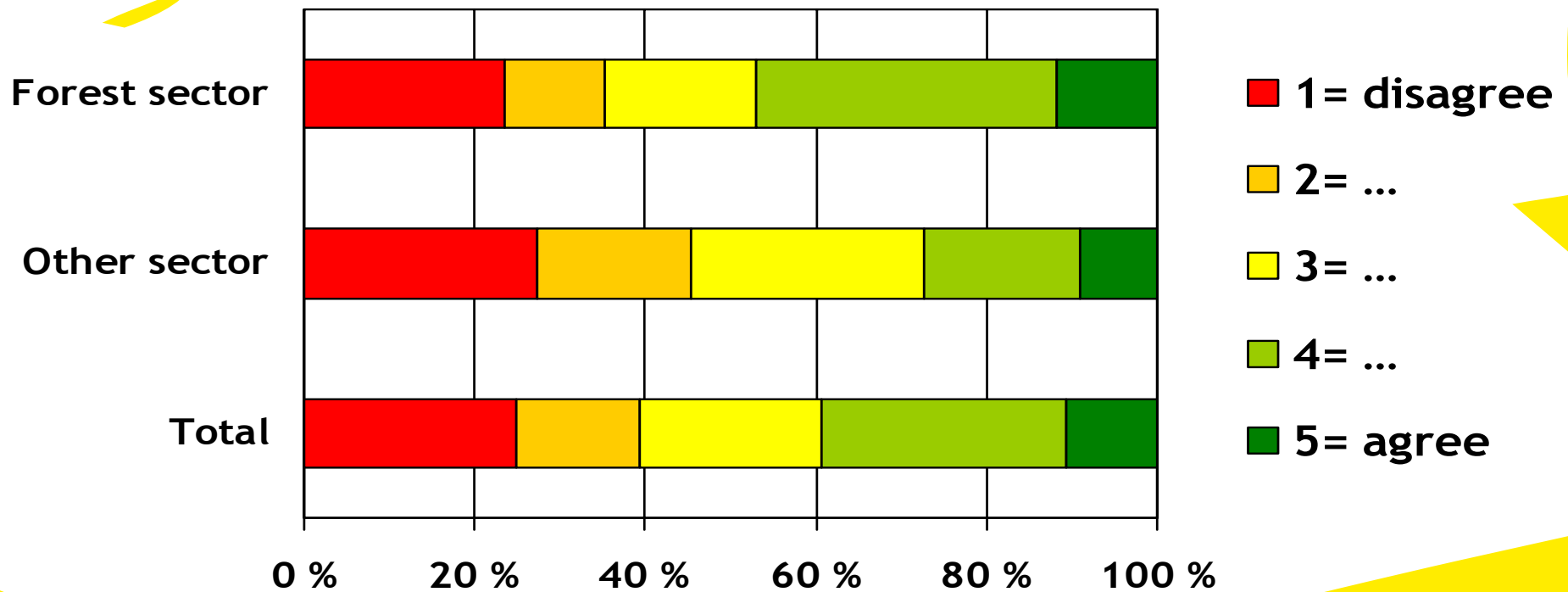
Participants' opinion survey: A. Resource trends and policies

1. Biomass should be used primarily for energy production



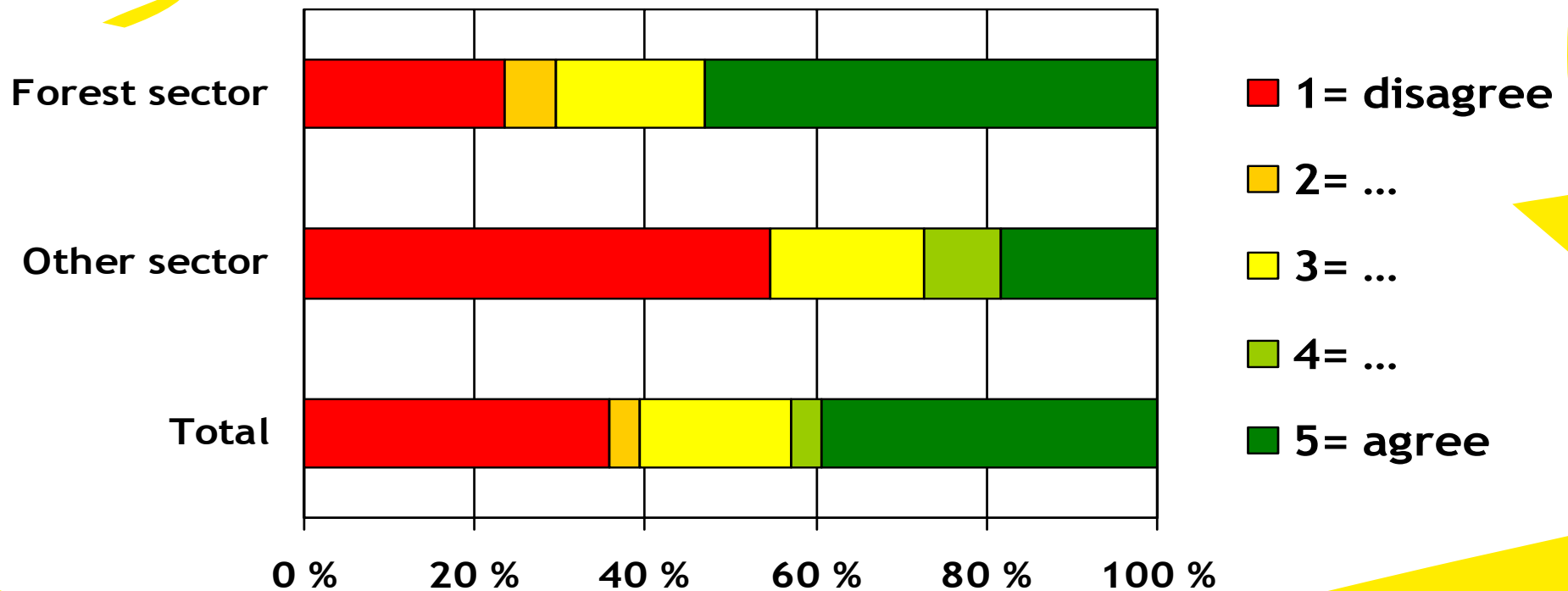
Participants' opinion survey: A. Resource trends and policies

2. Biomass should be used primarily for material production



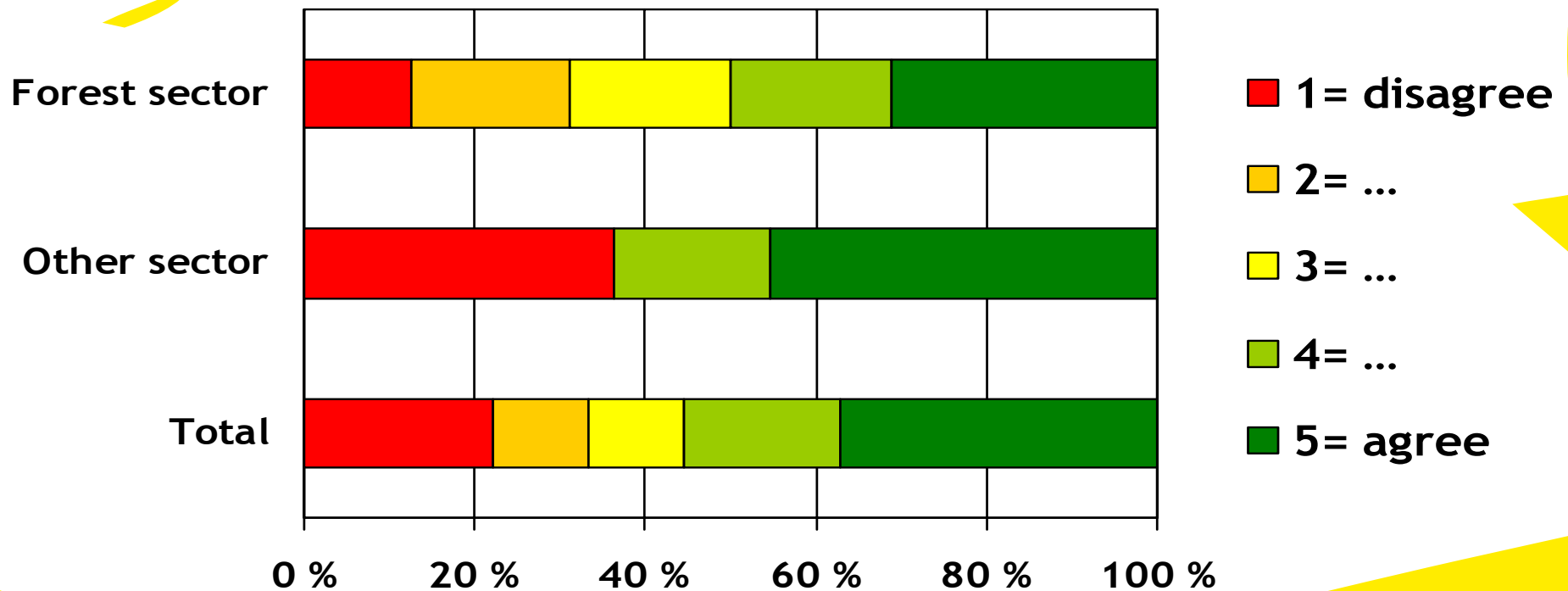
Participants' opinion survey: A. Resource trends and policies

3. No preferences should be made between the type of use of biomass (energy vs. products)



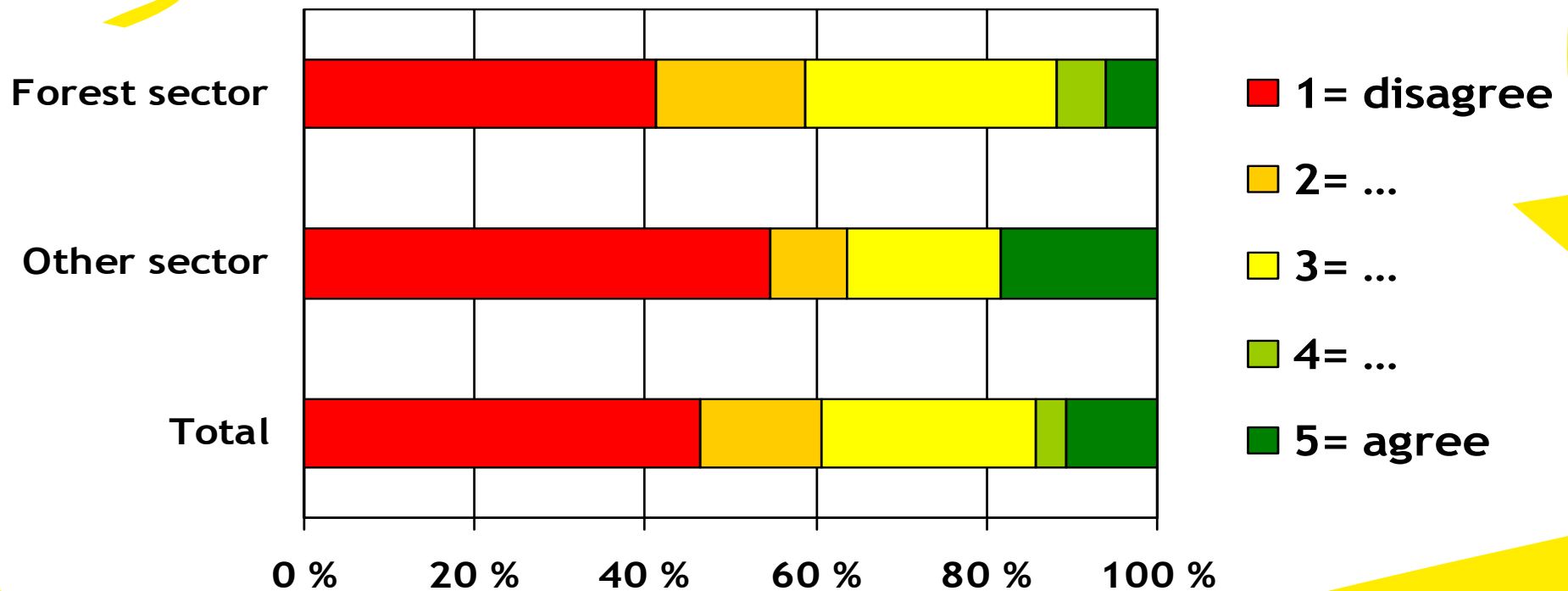
Participants' opinion survey: A. Resource trends and policies

4. The main issue is overall substitution of non-renewables with renewables, not the type of use of renewables



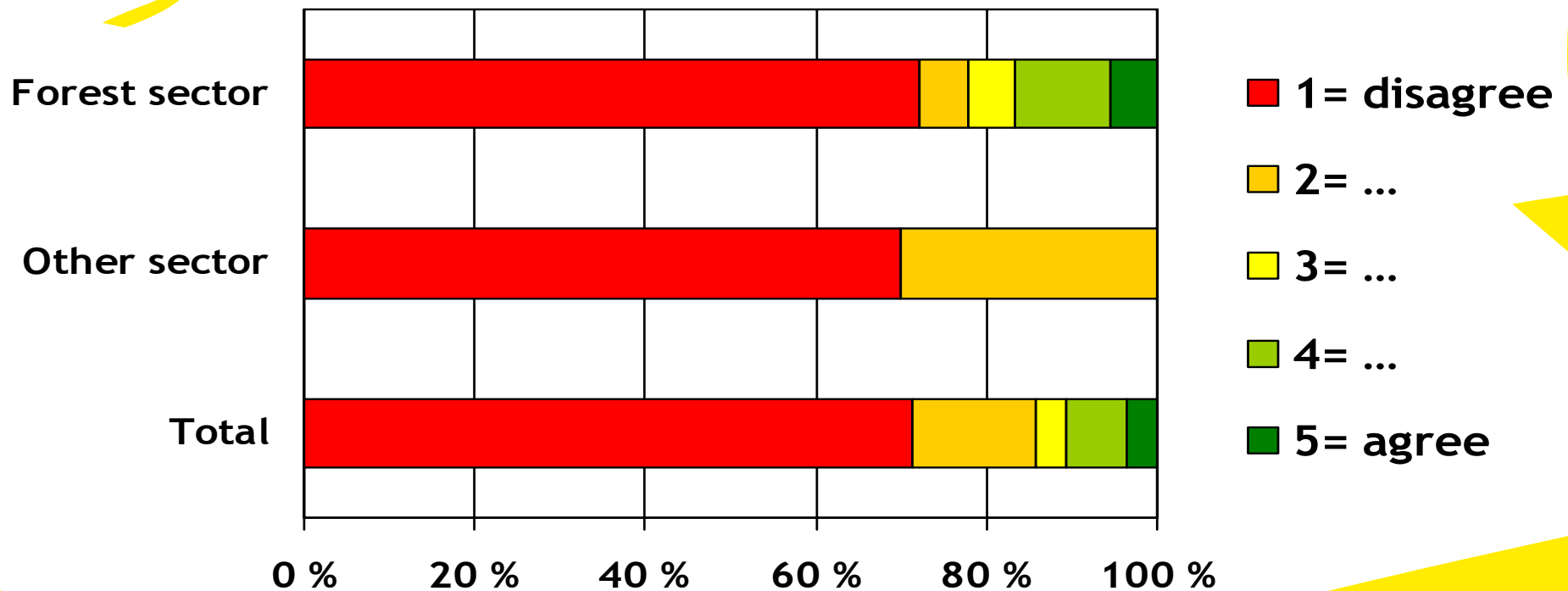
Participants' opinion survey: A. Resource trends and policies

5. Decreasing the absolute volume of resource is not necessary, if the dependence of economic growth on the use of natural resources can be diminished



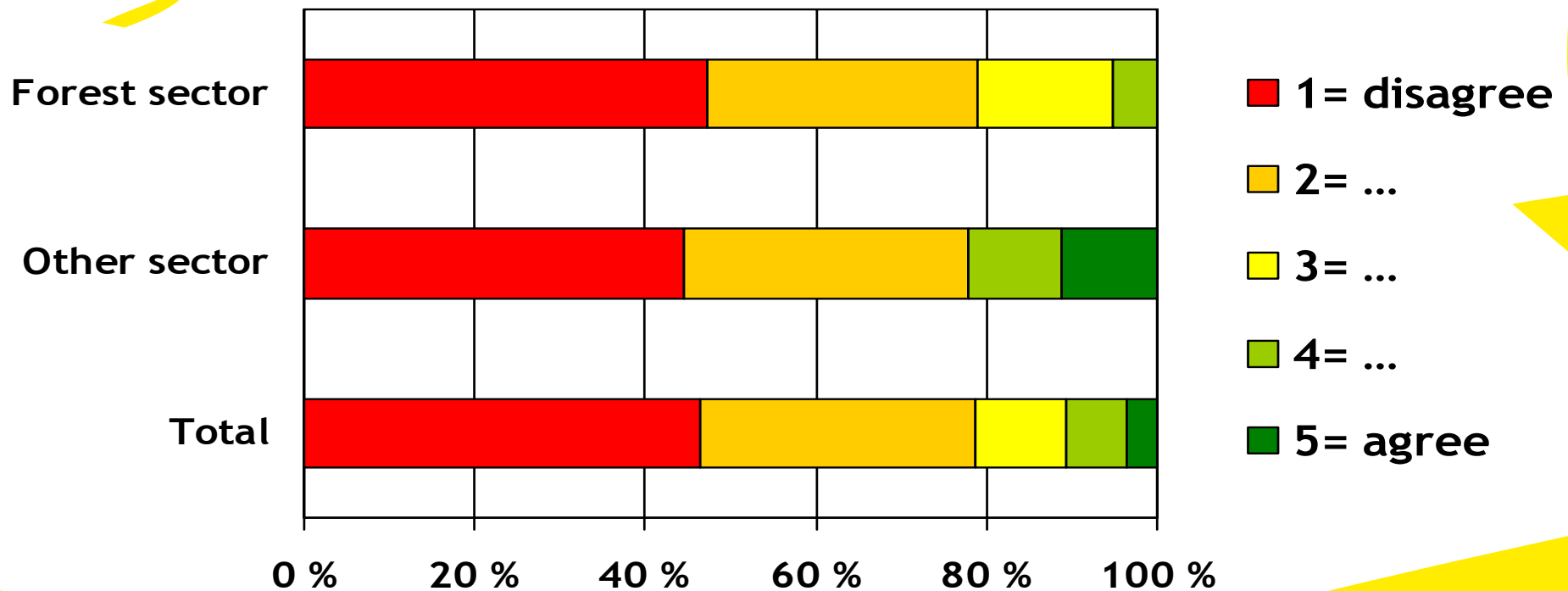
Participants' opinion survey: A. Resource trends and policies

6. There are more threats than opportunities in the increased use of renewables for material production in Europe



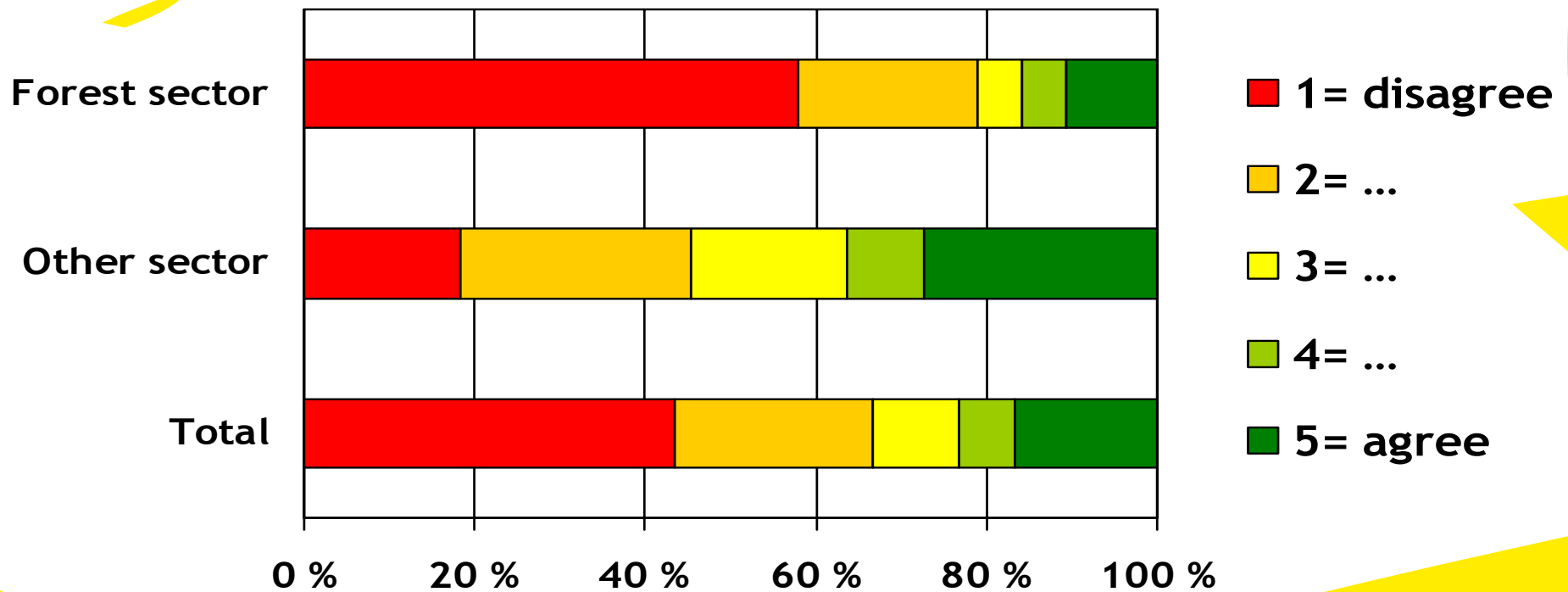
Participants' opinion survey: A. Resource trends and policies

7. Markets will take care of resource scarcity problems without serious policy intervention



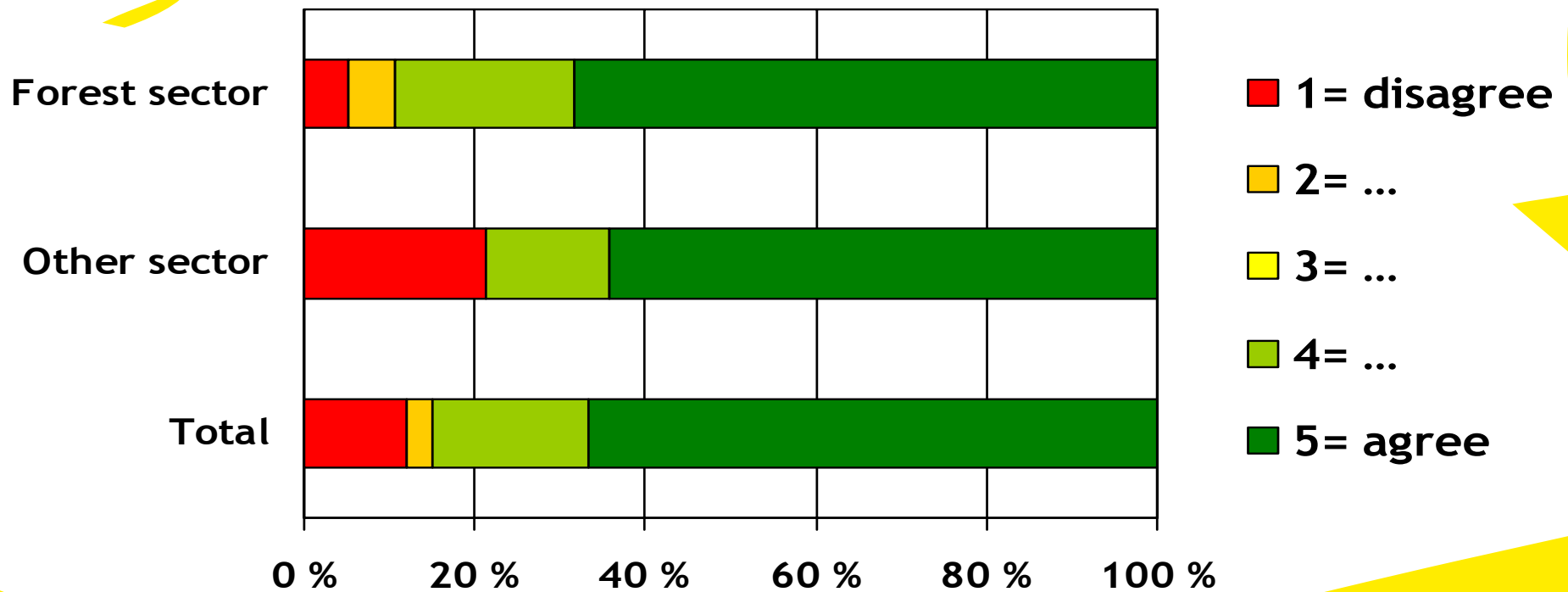
Participants' opinion survey: A. Resource trends and policies

8. In a globalising market, increasing dependency on imported resources is not a serious threat



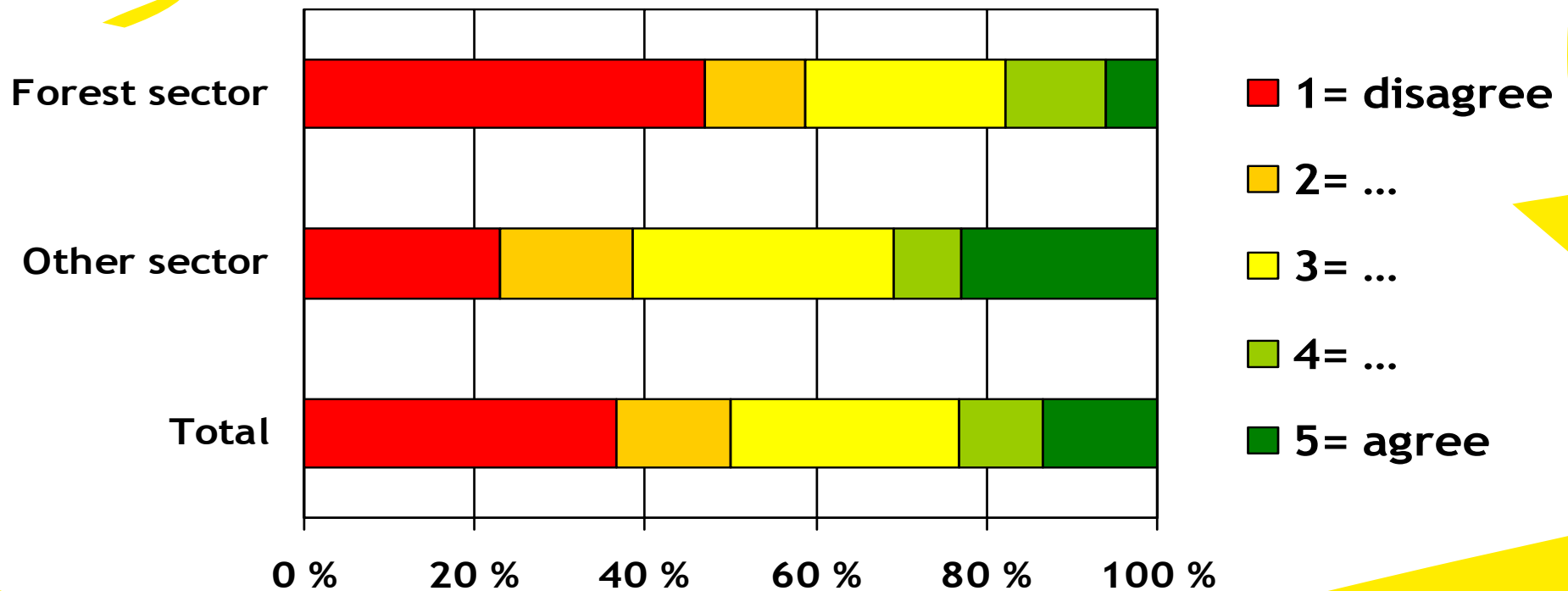
Participants' opinion survey: A. Resource trends and policies

9. Policies should take the origin of raw material more seriously



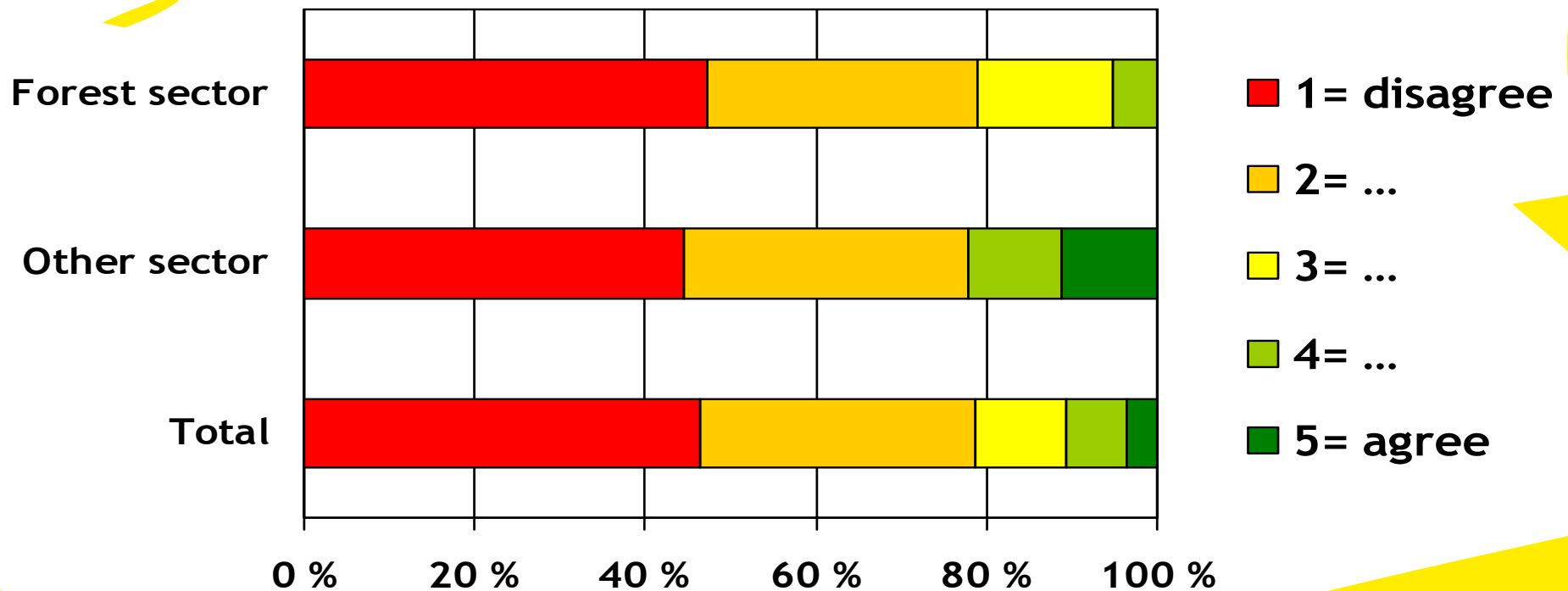
Participants' opinion survey: A. Resource trends and policies

10. Because of the seriousness of climate change, a shift from using biomass for energy than material products is acceptable



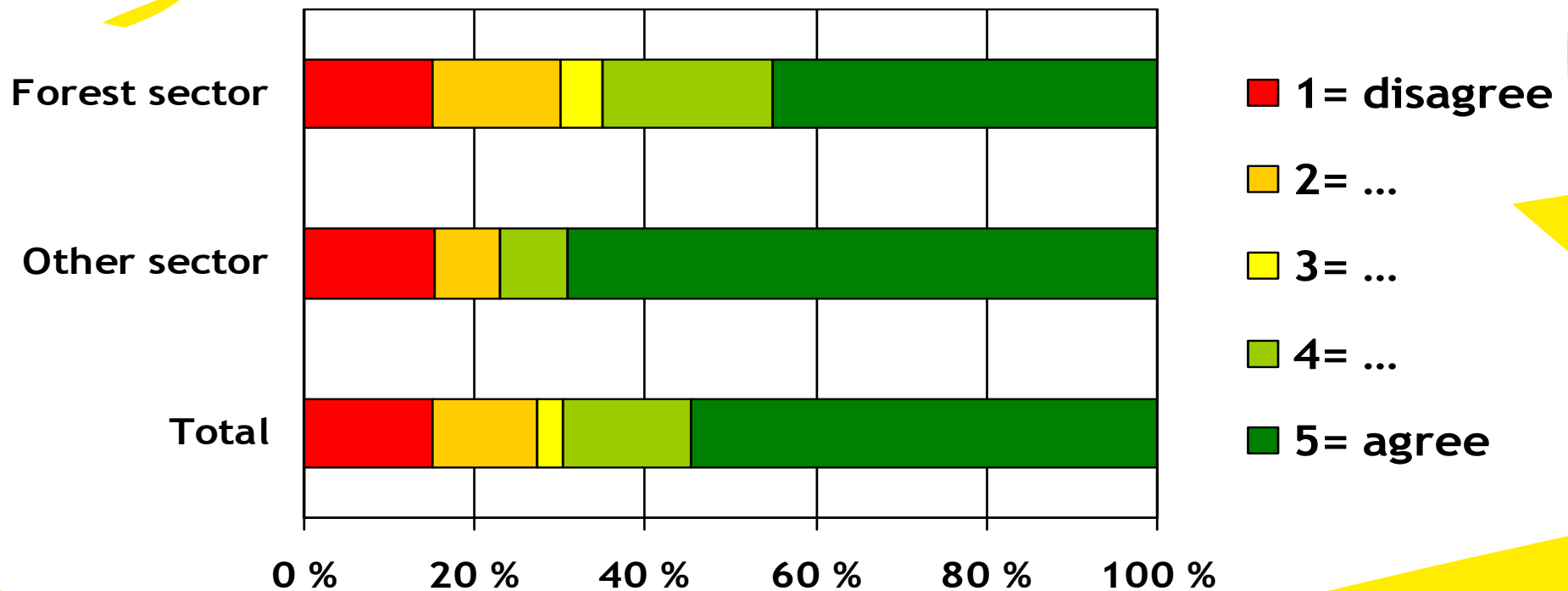
Participants' opinion survey: A. Resource trends and policies

11. There is need to establish a global panel on natural resources

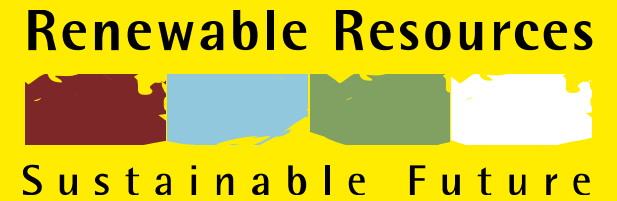


Participants' opinion survey: A. Resource trends and policies

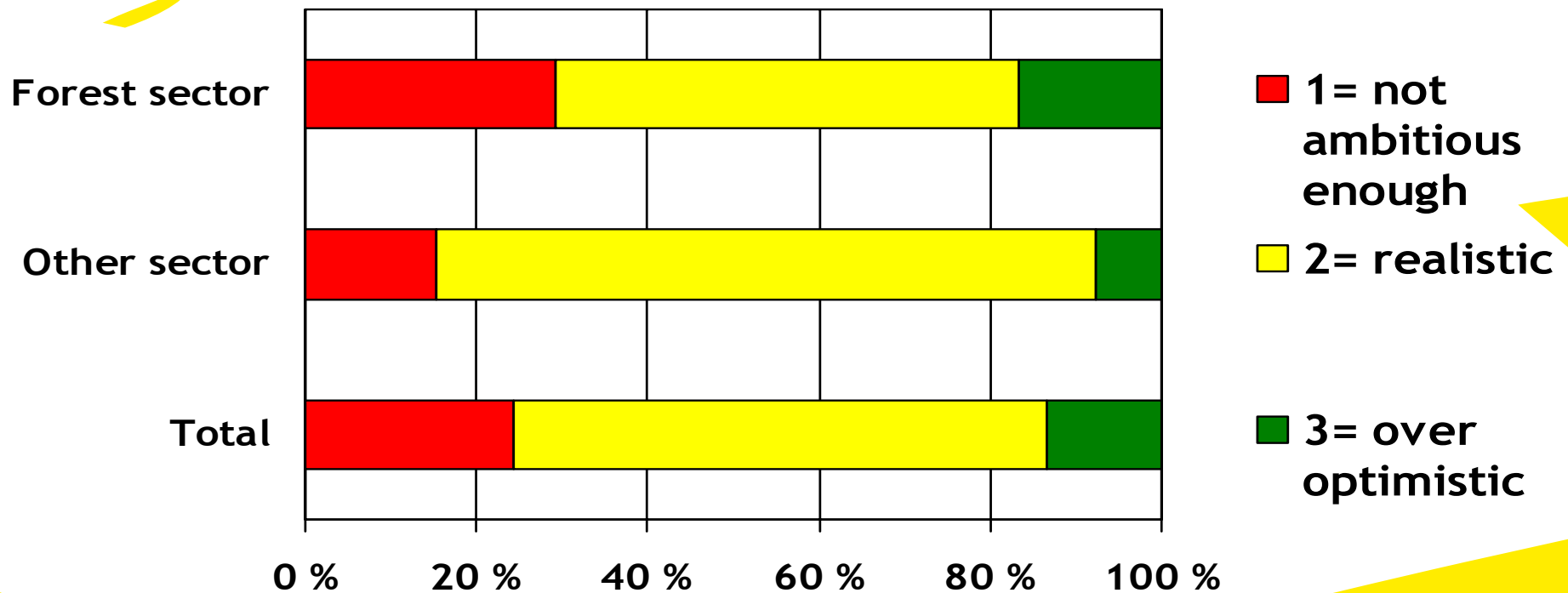
12. Substitution of non-renewables should also be promoted in material products, not only energy



Participants' opinion survey: B. Forest Based Sector Vision 2030 (FTP)



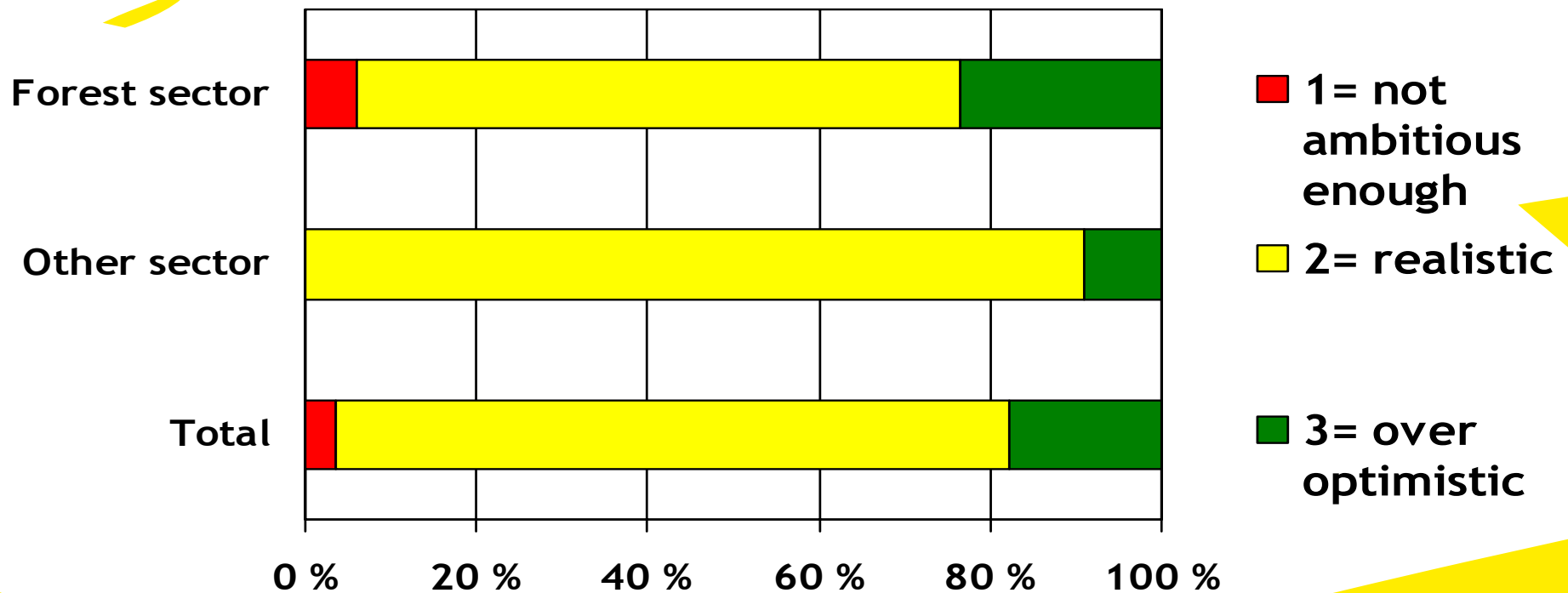
1. The European forest-based sector plays a key role in a sustainable society



Participants' opinion survey: B. Forest Based Sector Vision 2030 (FTP)

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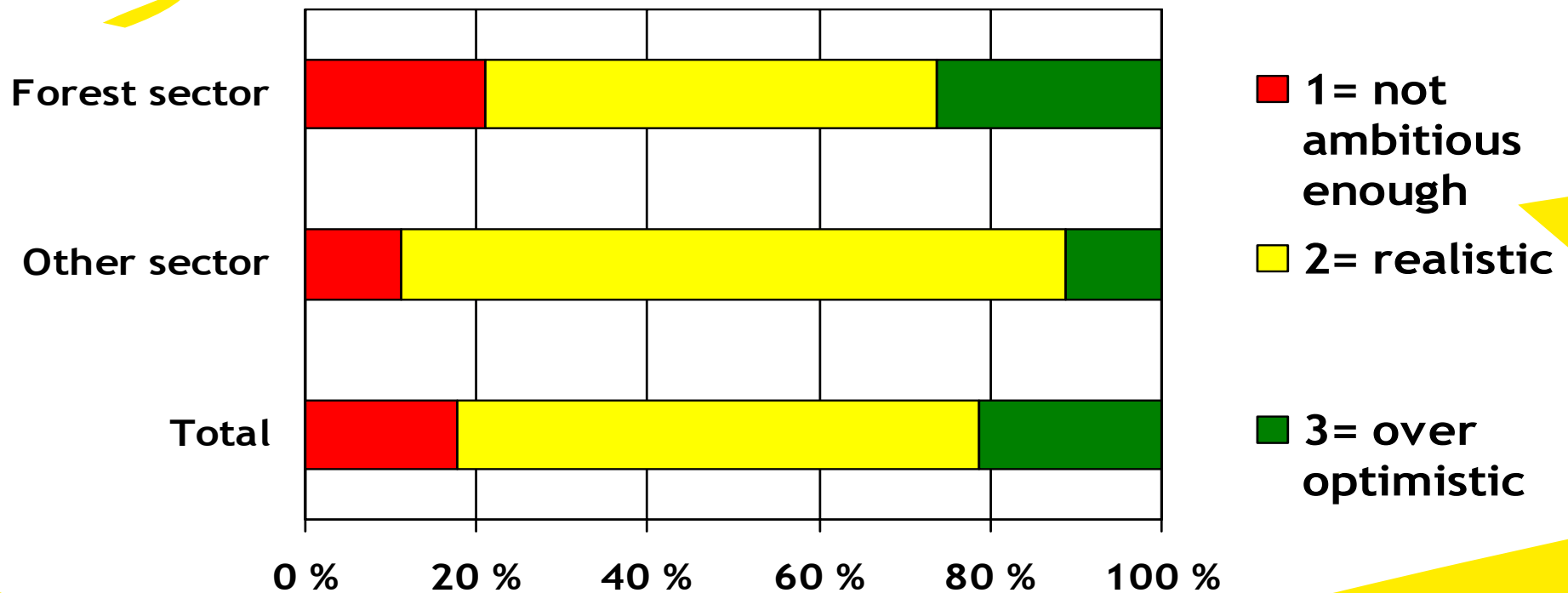
2. It comprises a competitive, knowledge-based industry that fosters the extended use of renewable forest resources



Participants' opinion survey: B. Forest Based Sector Vision 2030 (FTP)

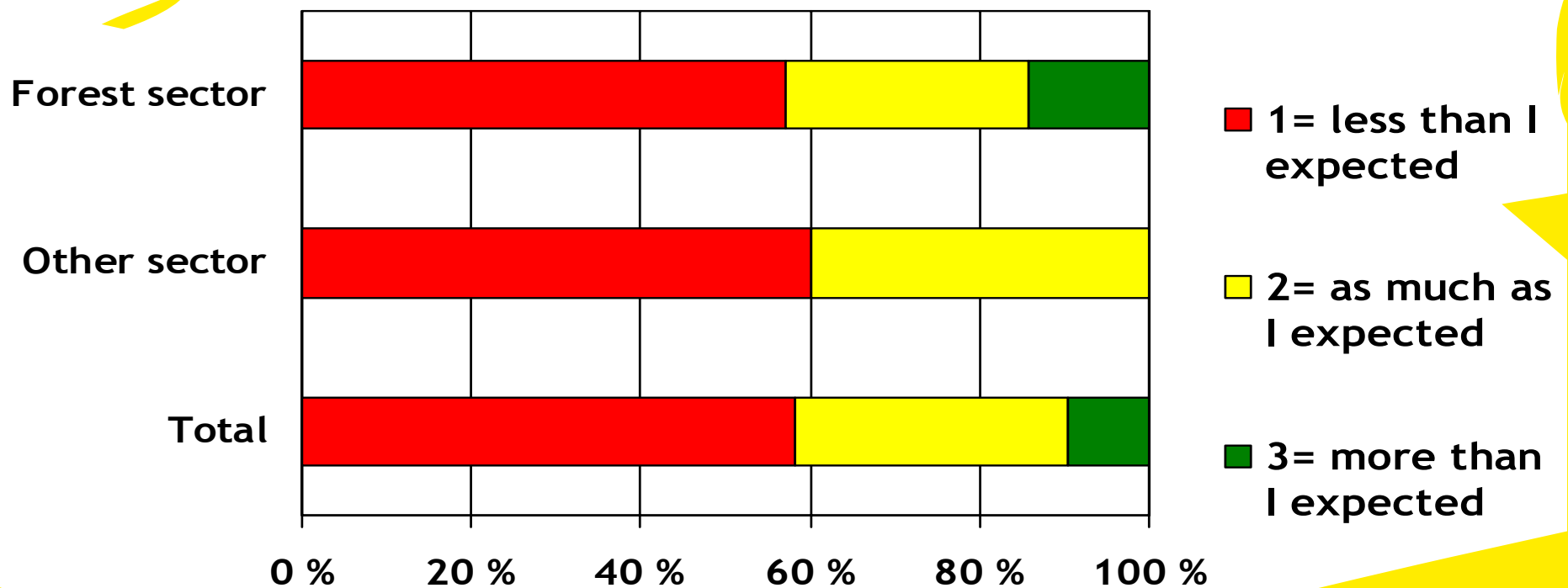
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3. It strives to ensure its societal contribution in the context of a bio-based, customer-driven and globally competitive European economy



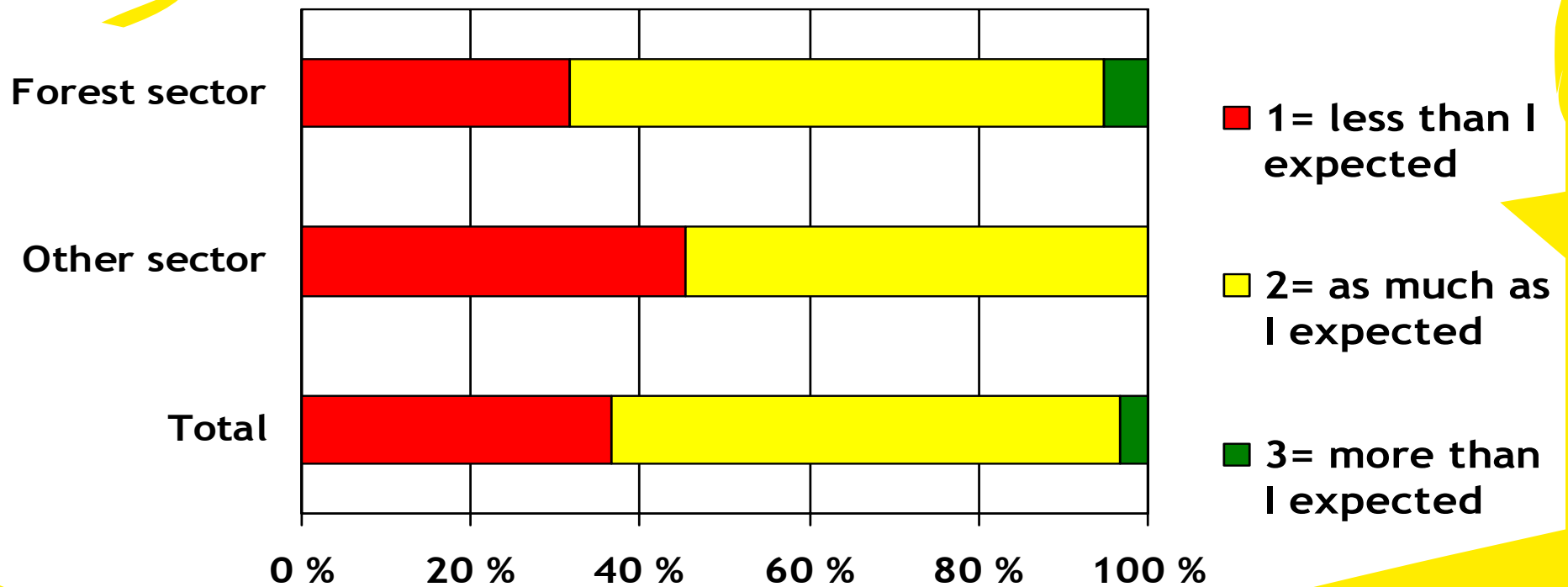
Participants' opinion survey: C. Level of knowledge

1. I knew about natural resources ...



Participants' opinion survey: C. Level of knowledge

2. I knew about forest resources ...



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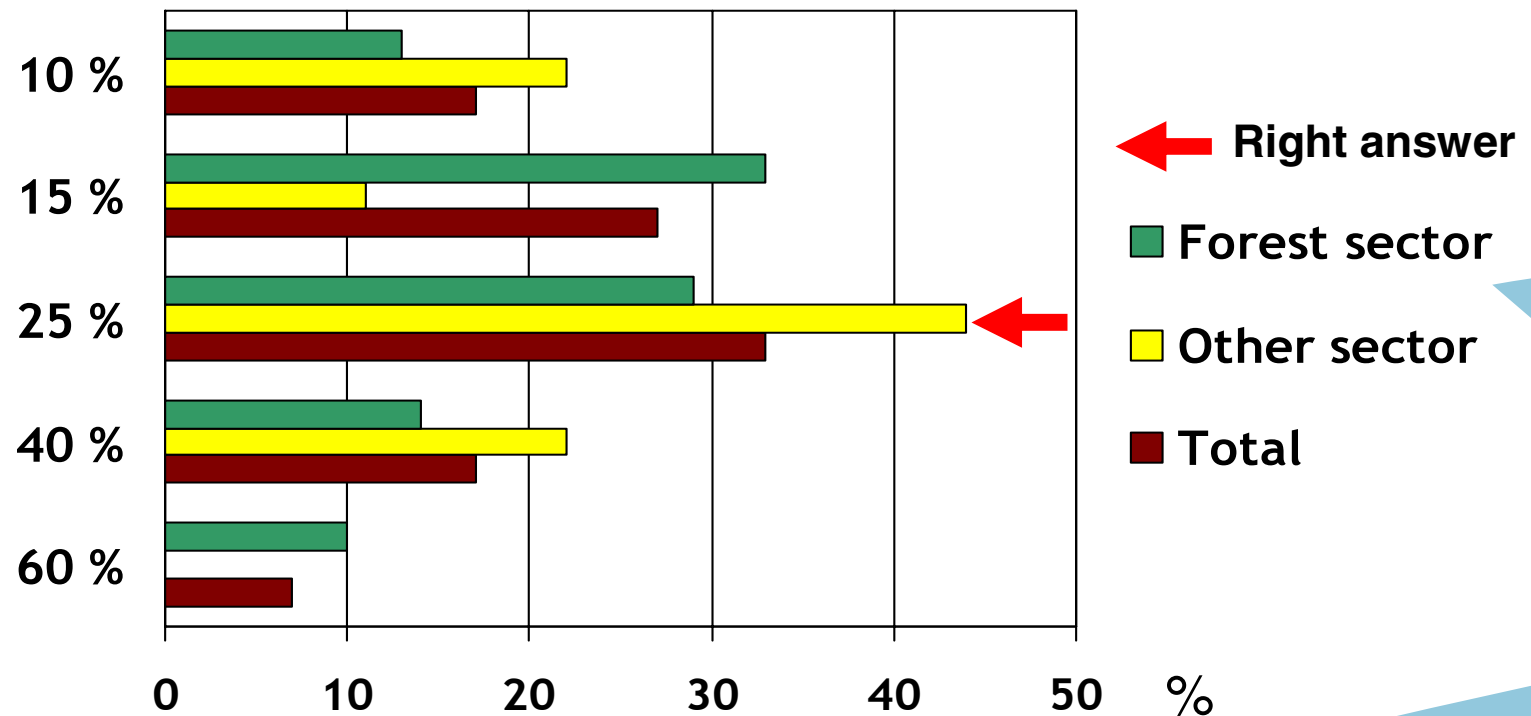


FACTS AND TRENDS

(Participants'
knowledge survey)

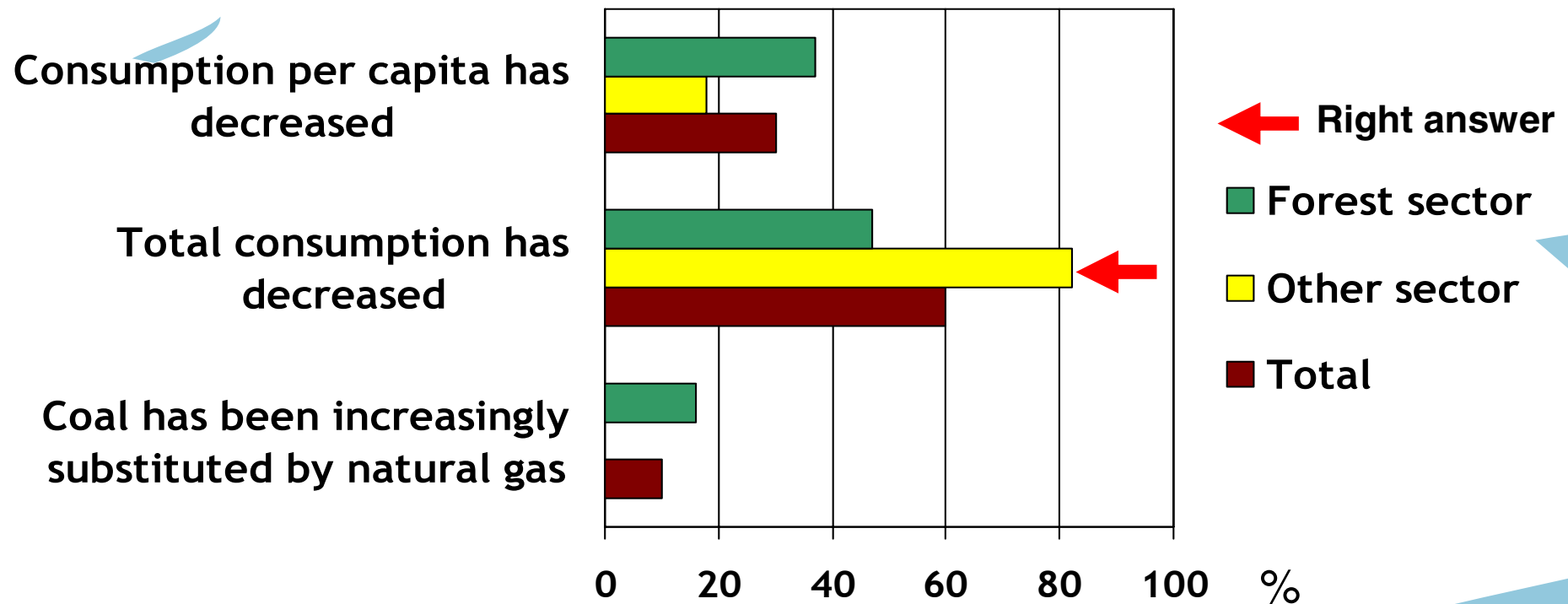
Participants' knowledge survey: A. Natural resources

1. The share of renewables (biomass) of natural resources used in EU-15 is ...



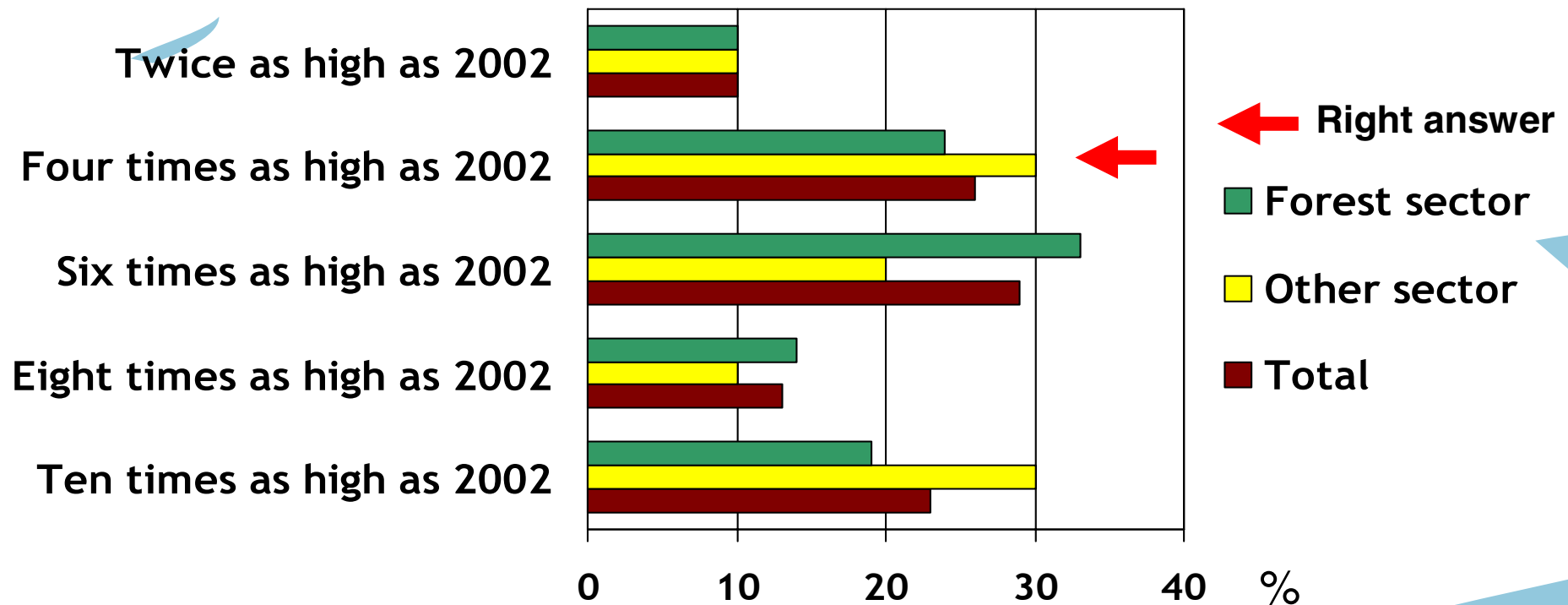
Participants' knowledge survey: A. Natural resources

2. One of these arguments about European trends in fossil fuels since 1990 is **false**. Which one?



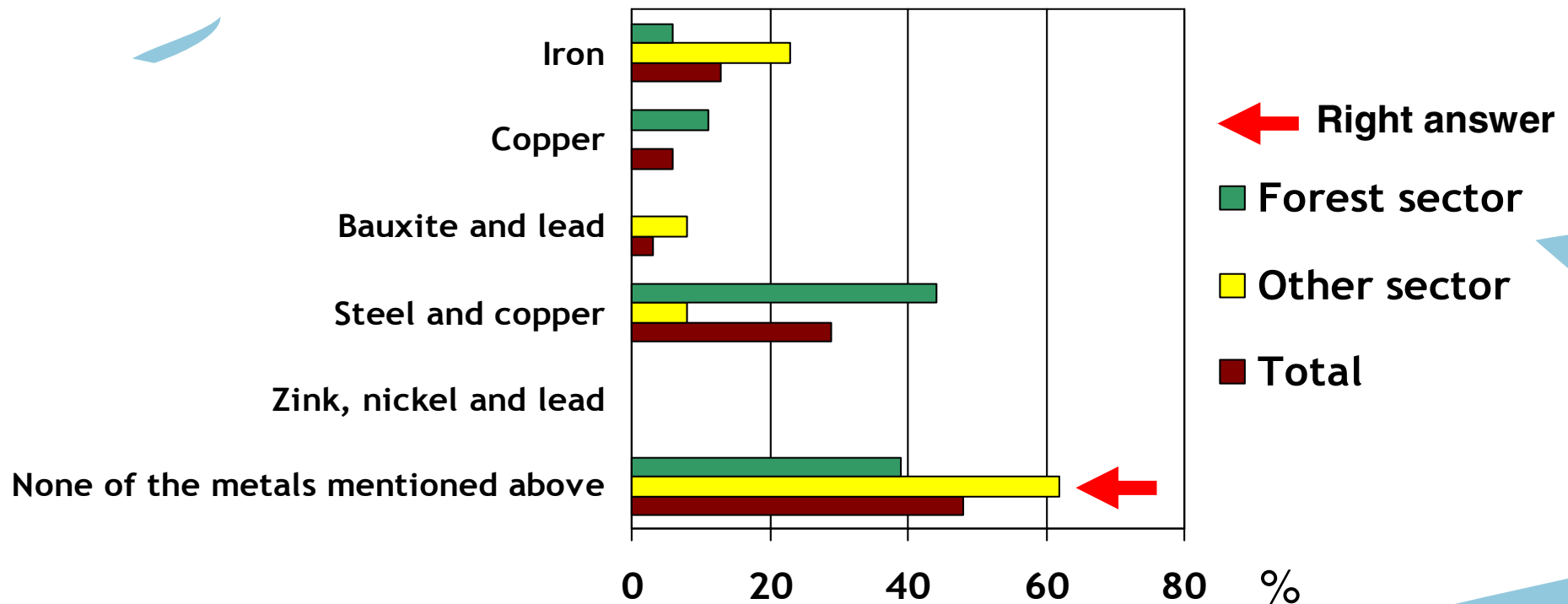
Participants' knowledge survey: A. Natural resources

3. The expected environmentally-compatible primary bioenergy potential in Europe in 2030 is ...



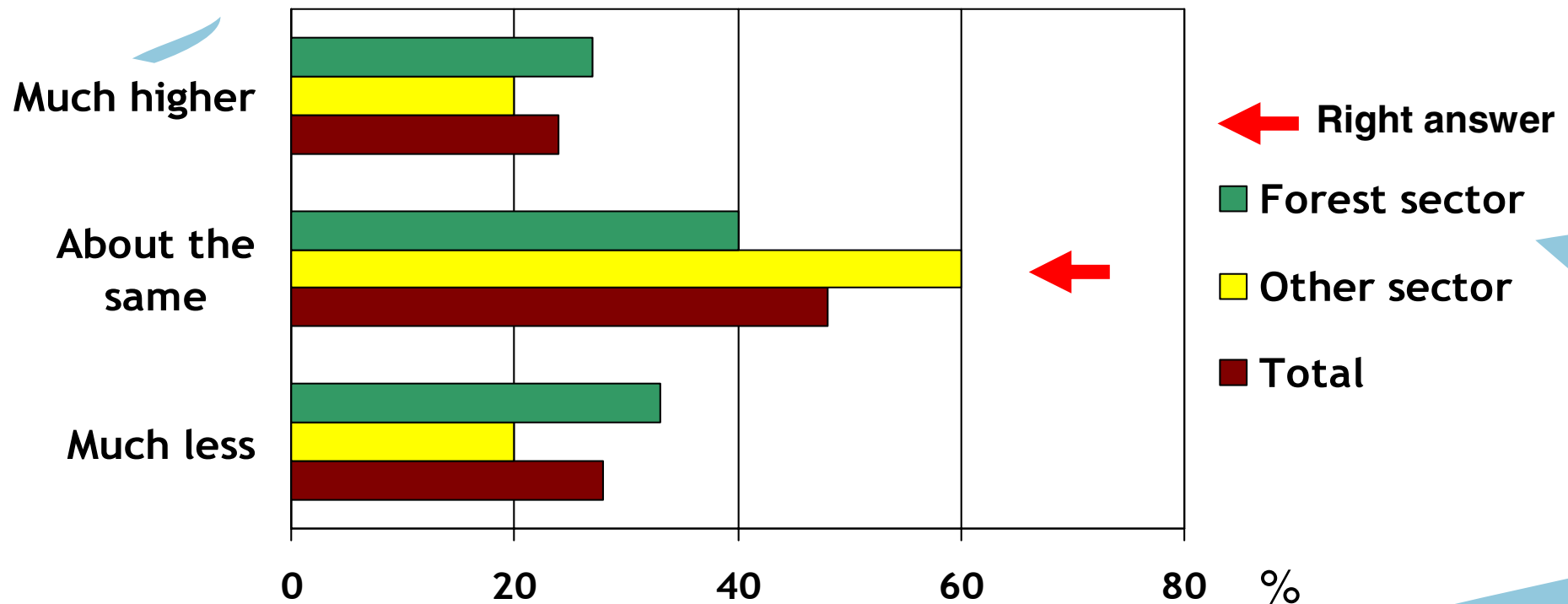
Participants' knowledge survey: A. Natural resources

4. European production exceeds consumption in ...



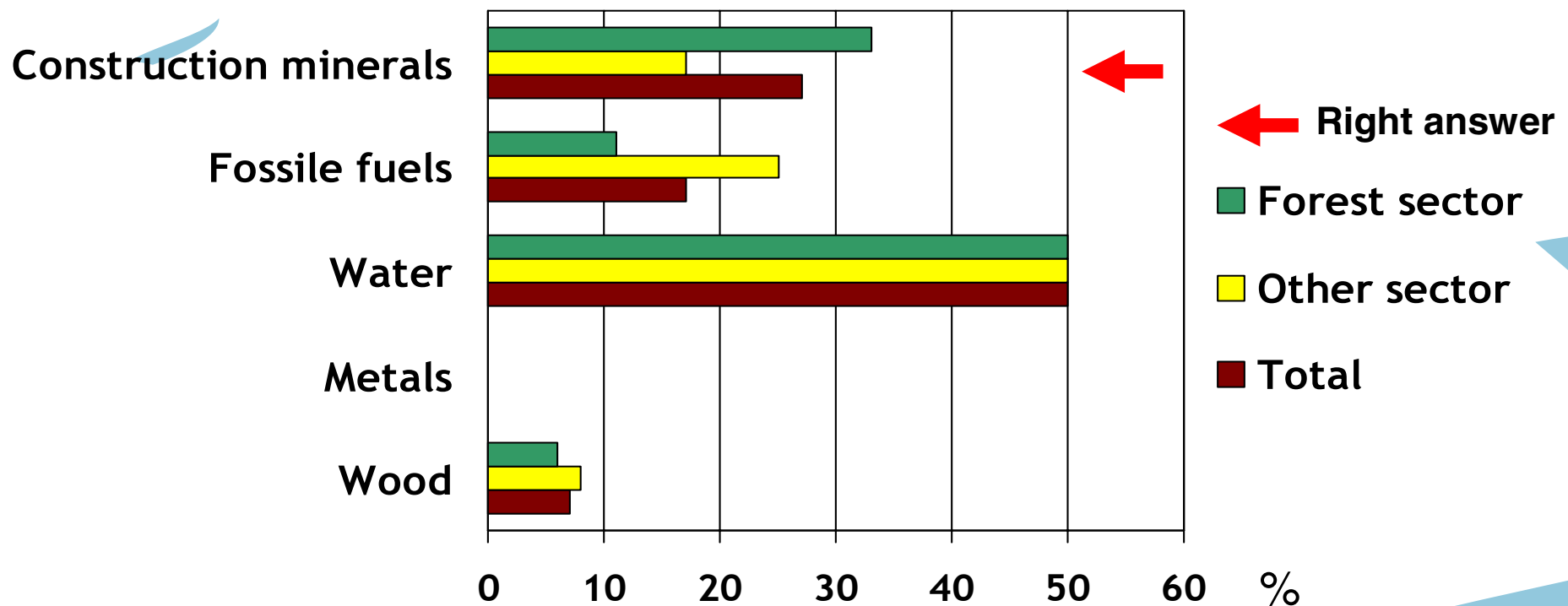
Participants' knowledge survey: A. Natural resources

5. Compared to the consumption of cereals (tonnes), the consumption of wood in Europe is ...



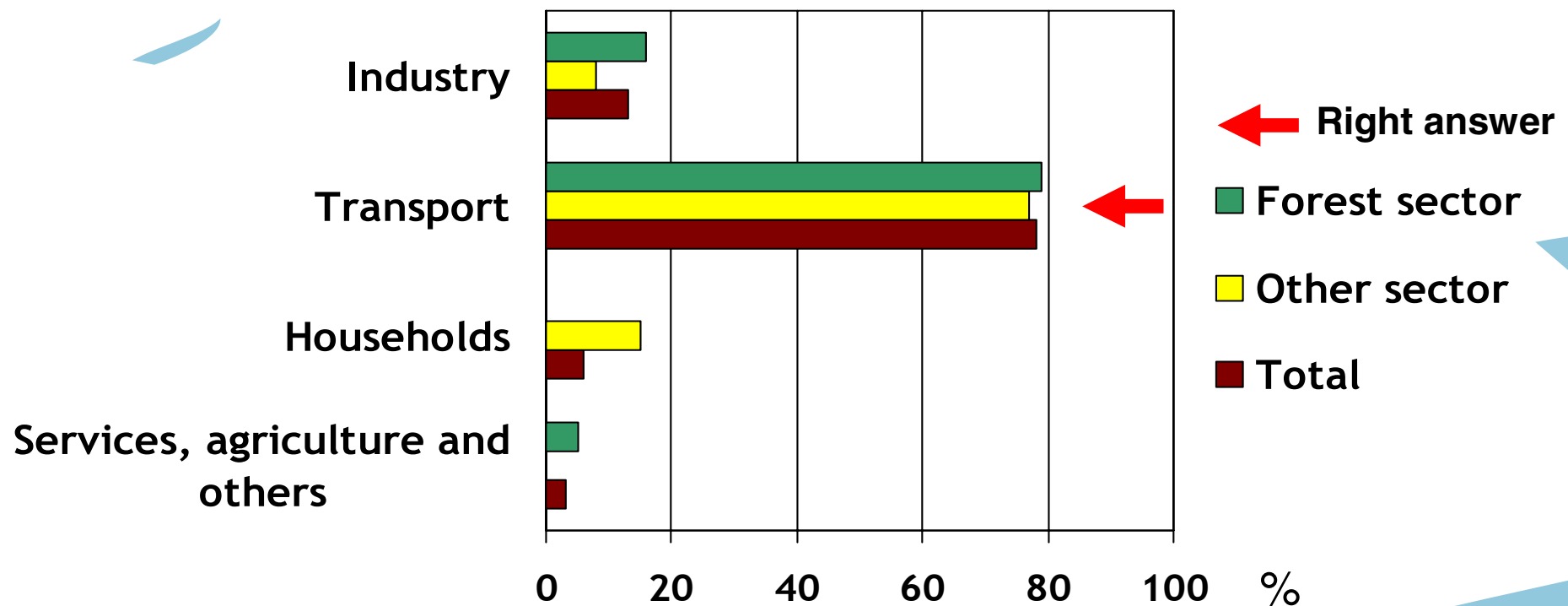
Participants' knowledge survey: A. Natural resources

6. Which of the following resources is used the most?



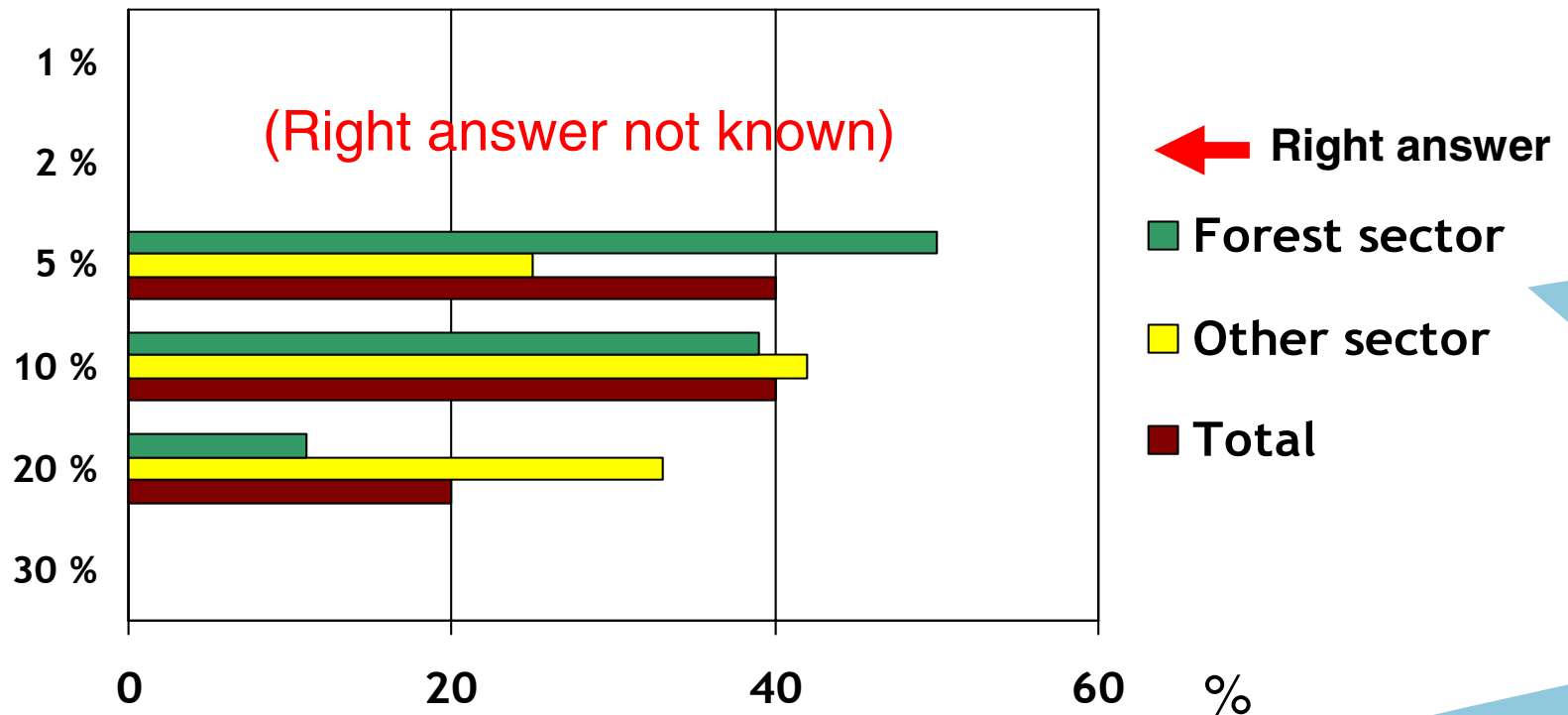
Participants' knowledge survey: A. Natural resources

7. Which sector is responsible for the most growth of energy consumption in Europe?



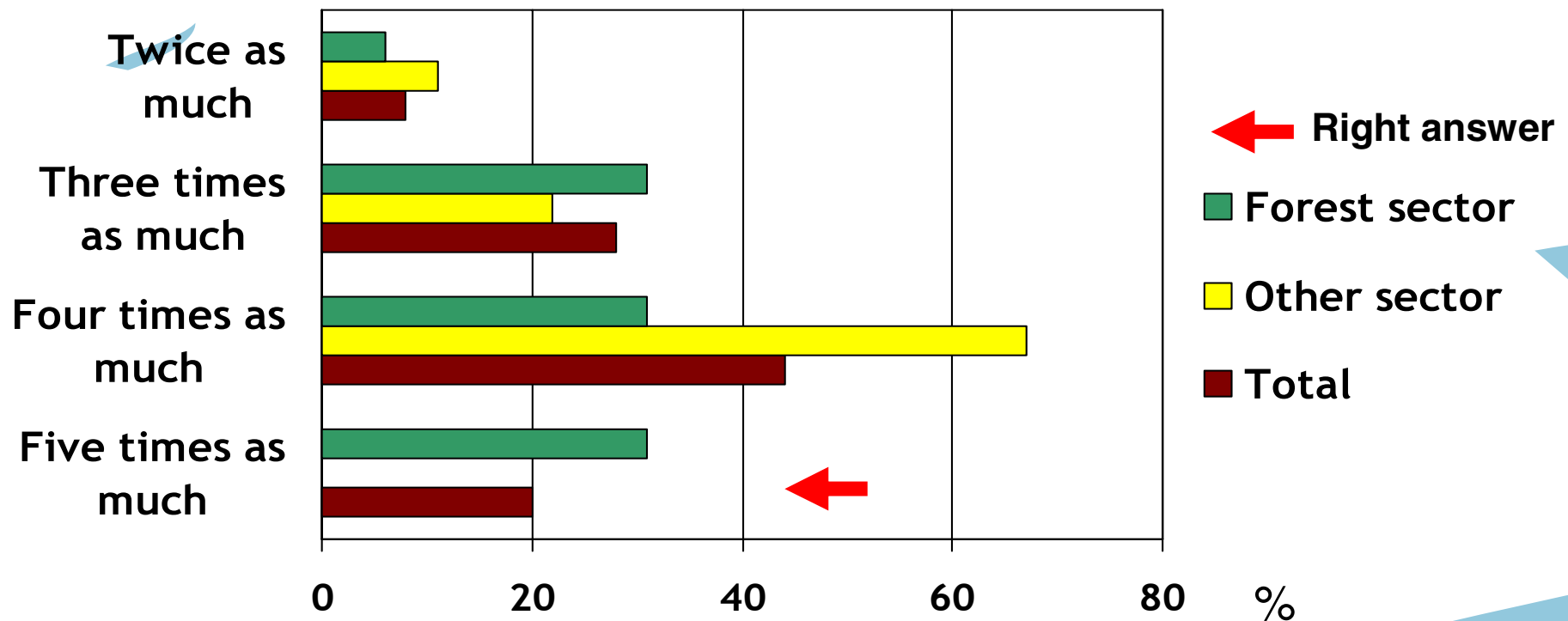
Participants' knowledge survey: A. Natural resources

8. What is the share of wood in construction materials used in Europe?



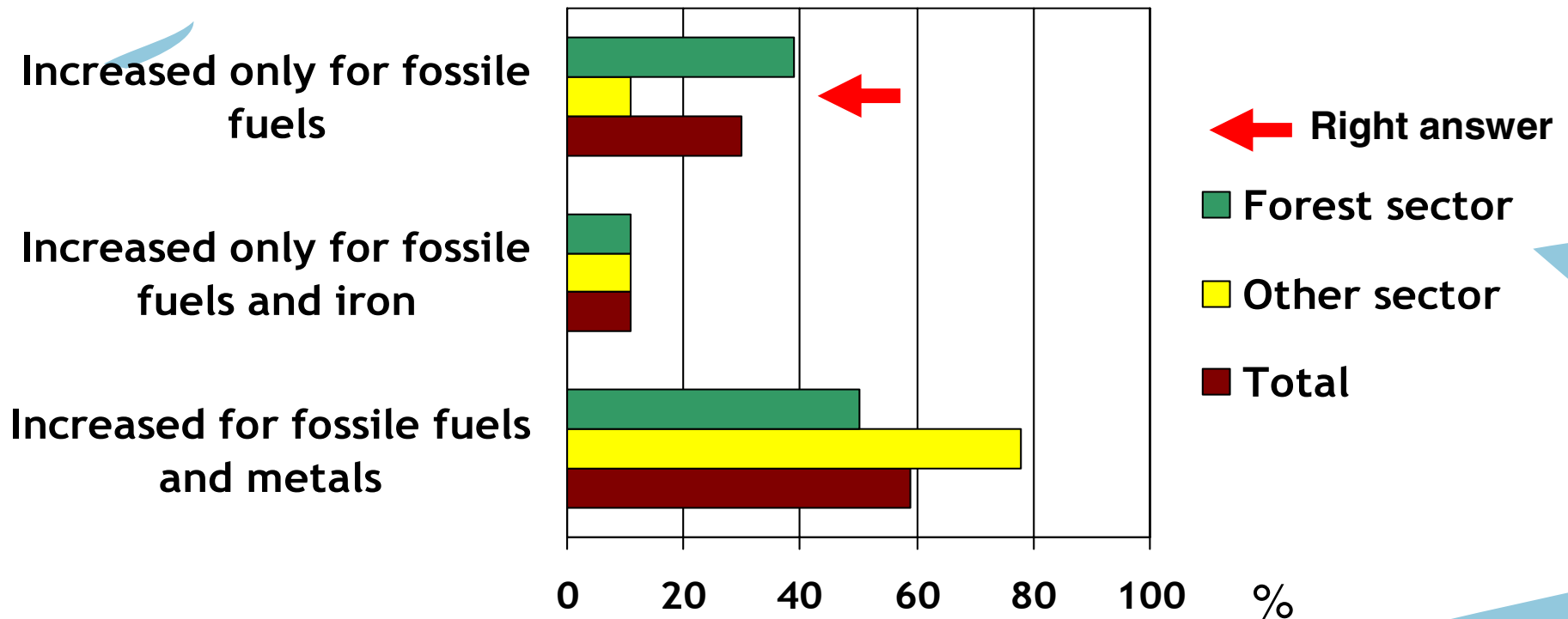
Participants' knowledge survey: A. Natural resources

9. In 1970 (EU-15), imports and domestic extraction of metal ores was the same. Now import is ...



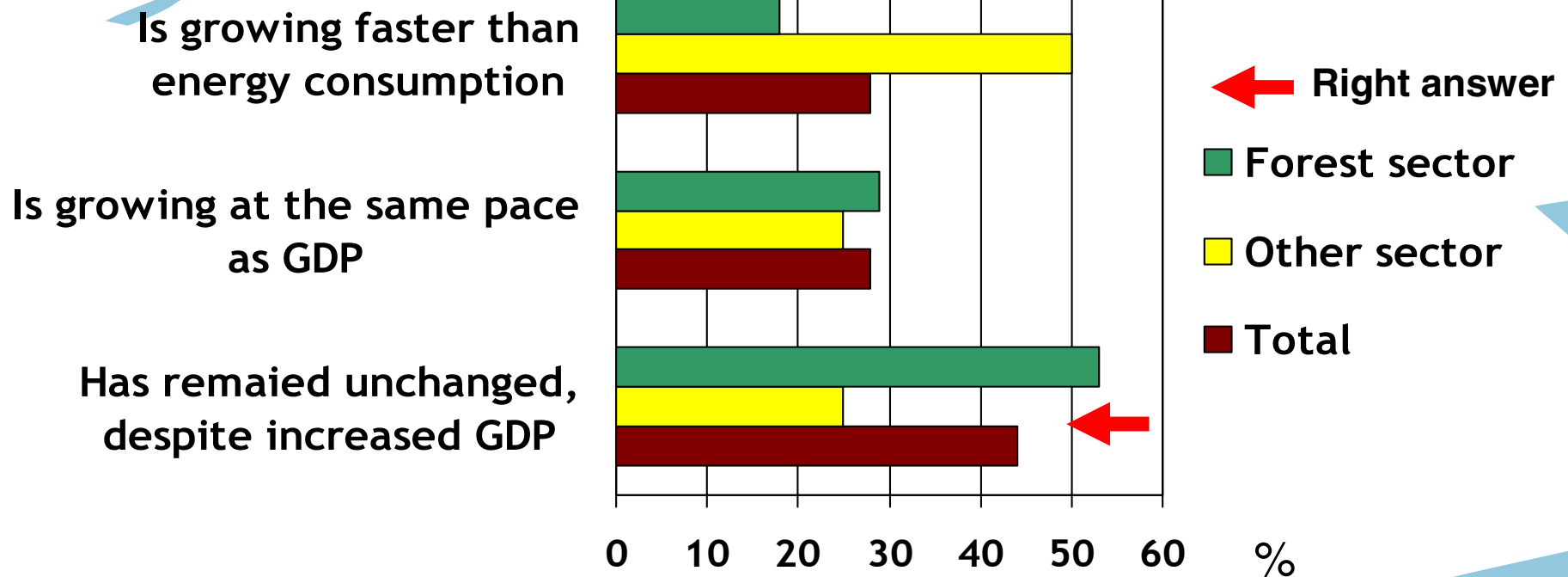
Participants' knowledge survey: A. Natural resources

10. Real prices for natural resources have ...



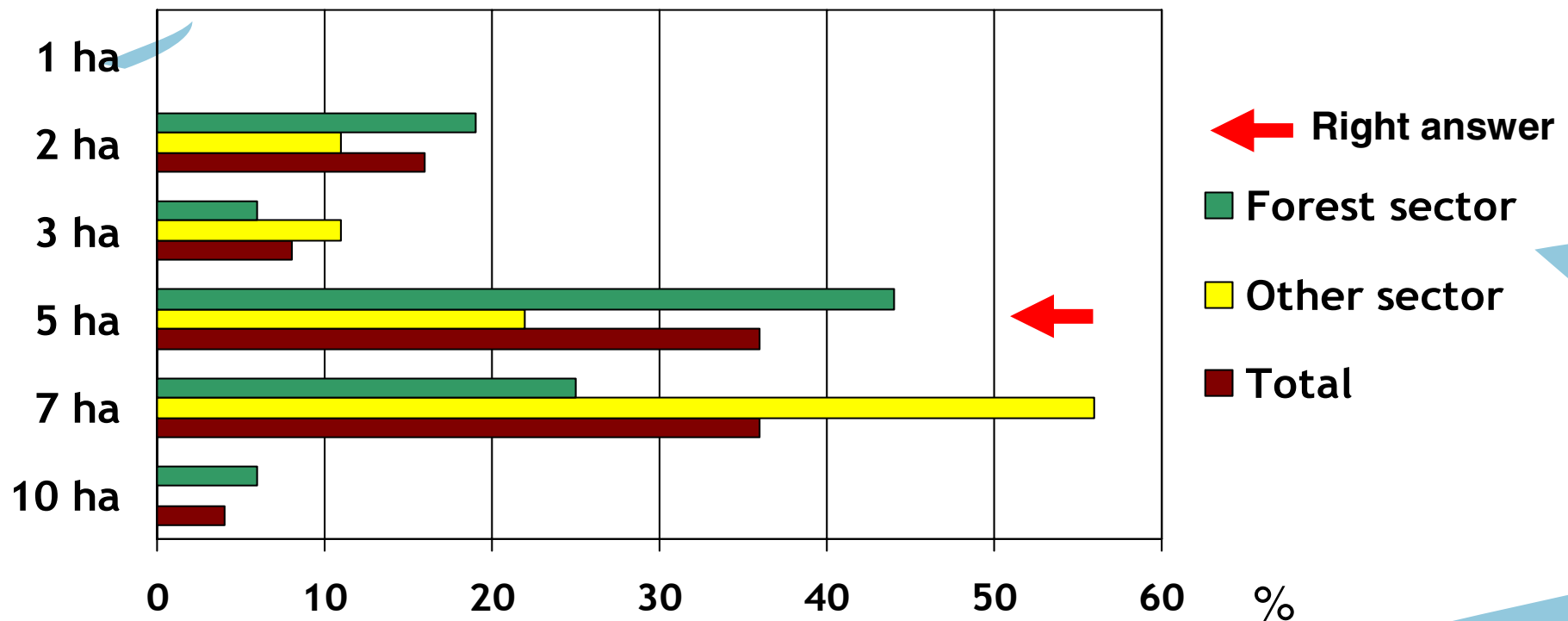
Participants' knowledge survey: A. Natural resources

11. Material consumption in EU-15 in the 1990s ...



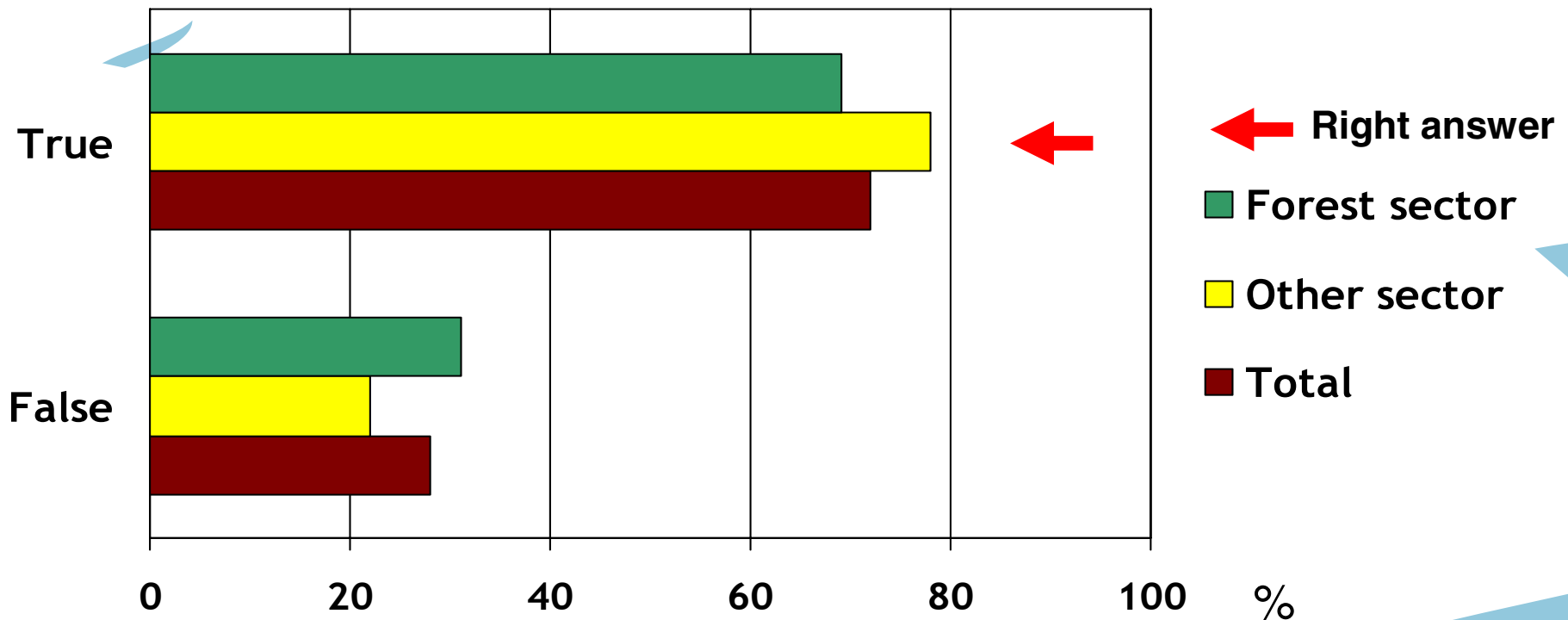
Participants' knowledge survey: A. Natural resources

12. How much land does an average European need in order to satisfy his needs sustainably (=ecological footprint)?



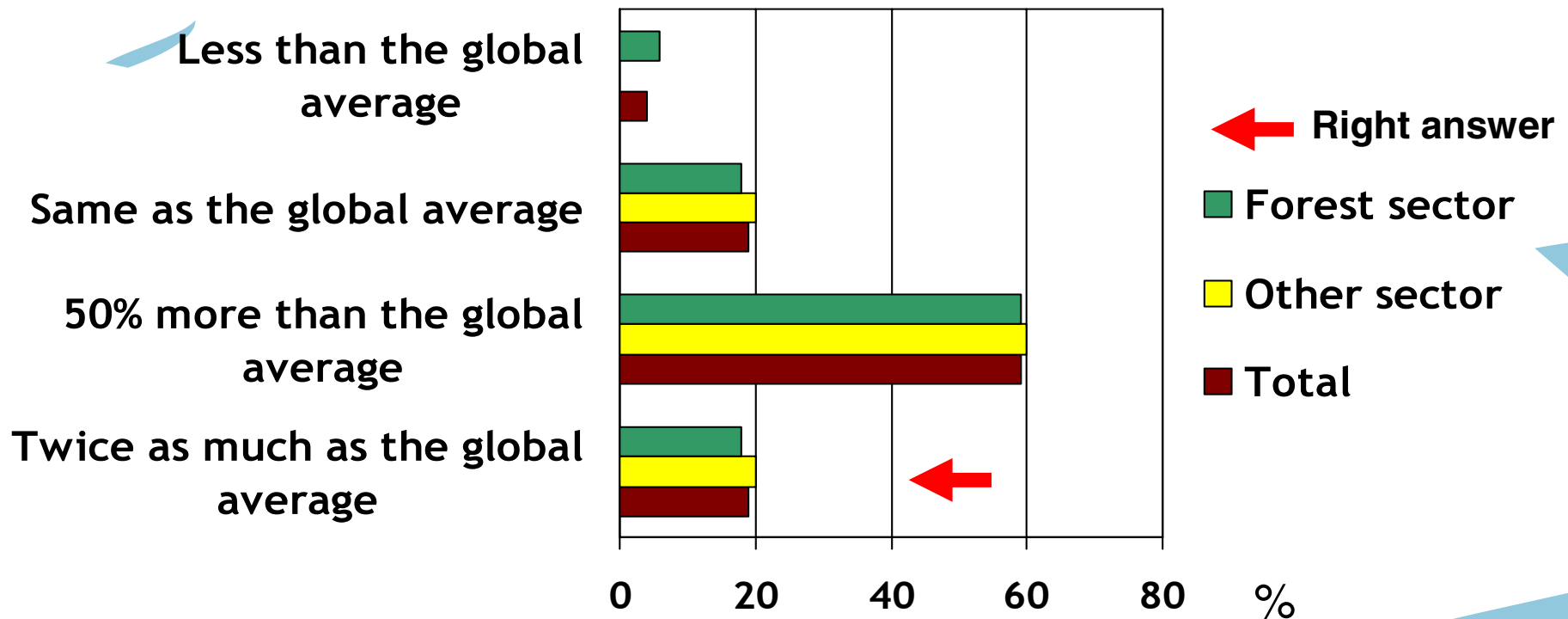
Participants' knowledge survey: B. Forest resources

1. Globally, the forest area is most growing in areas with the highest level of forest industry production



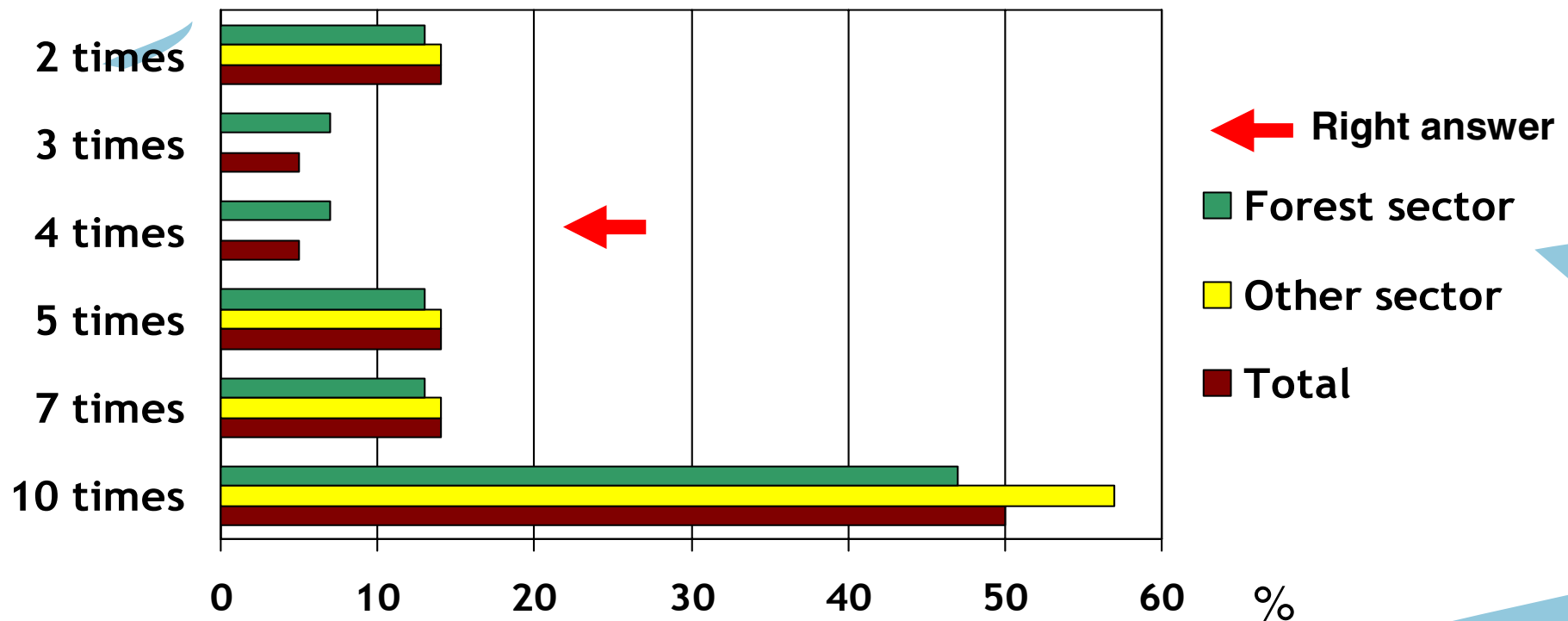
Participants' knowledge survey: B. Forest resources

2. In the case of “business as usual”, European forests are in 2040 expected to have a growing stock (m³/ha) that is ...



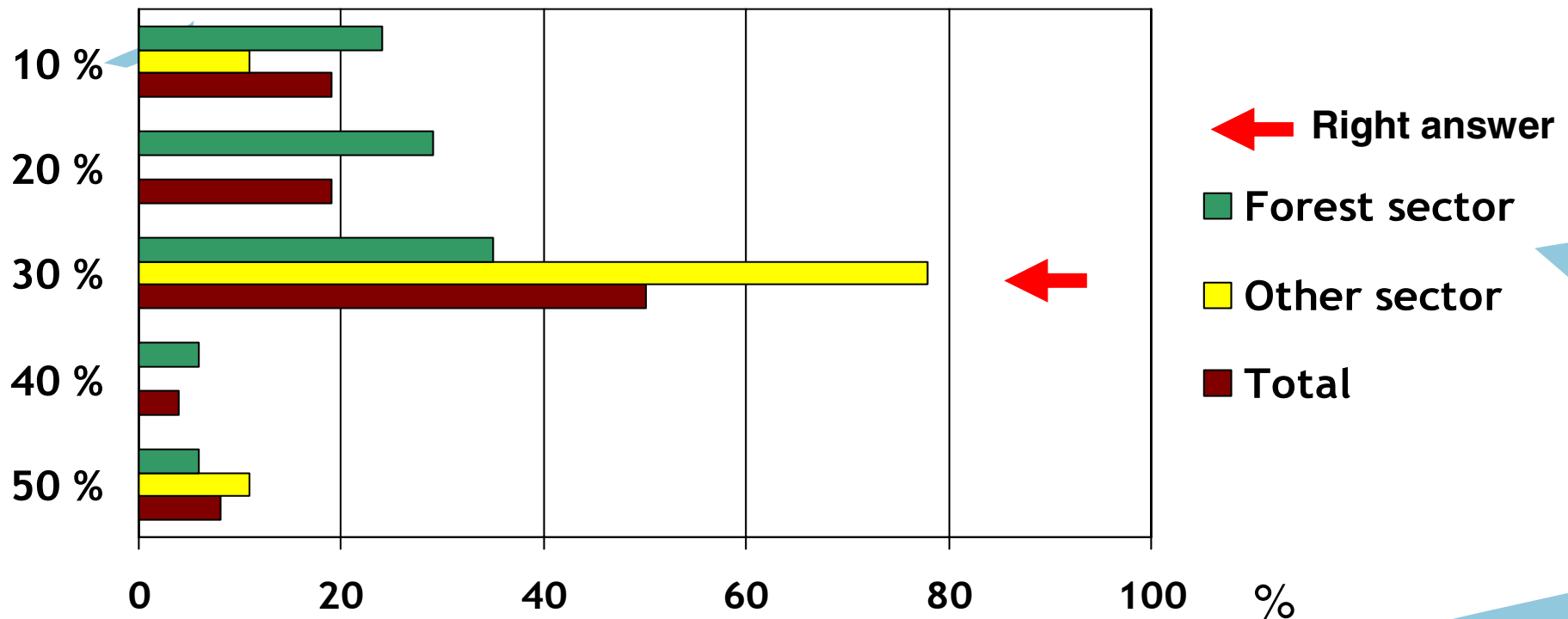
Participants' knowledge survey: B. Forest resources

3. How much more is wood used for industrial production than for fuel in Europe?



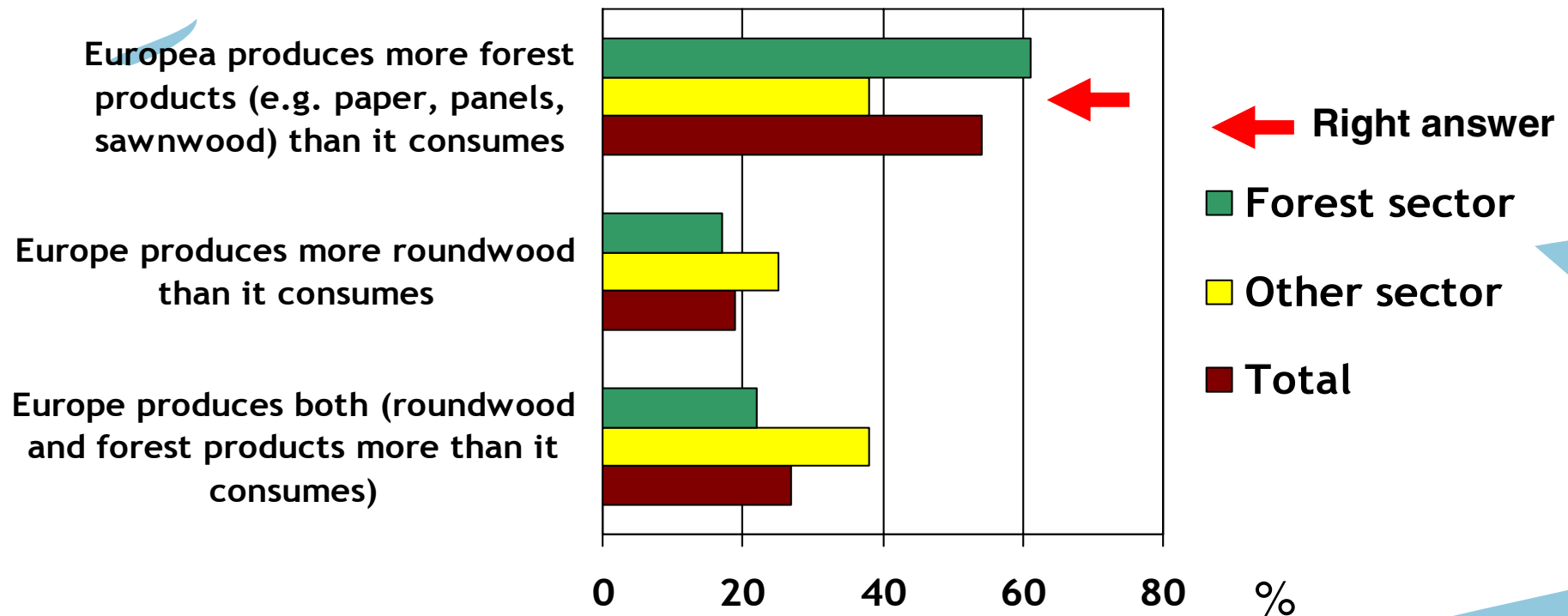
Participants' knowledge survey: B. Forest resources

4. During 1992-2002, the consumption of forest products in Europe has increased ...



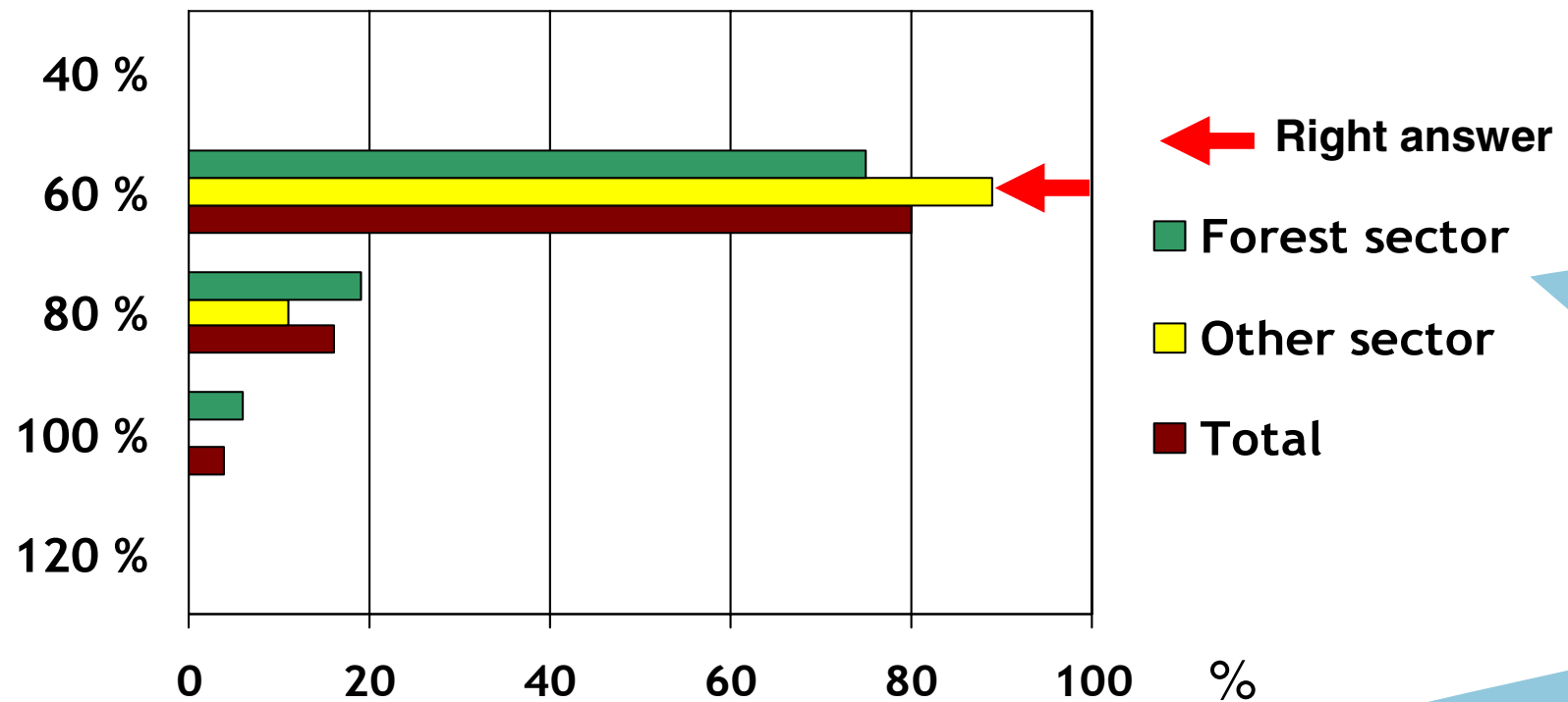
Participants' knowledge survey: B. Forest resources

5. Which of the following statements is true?



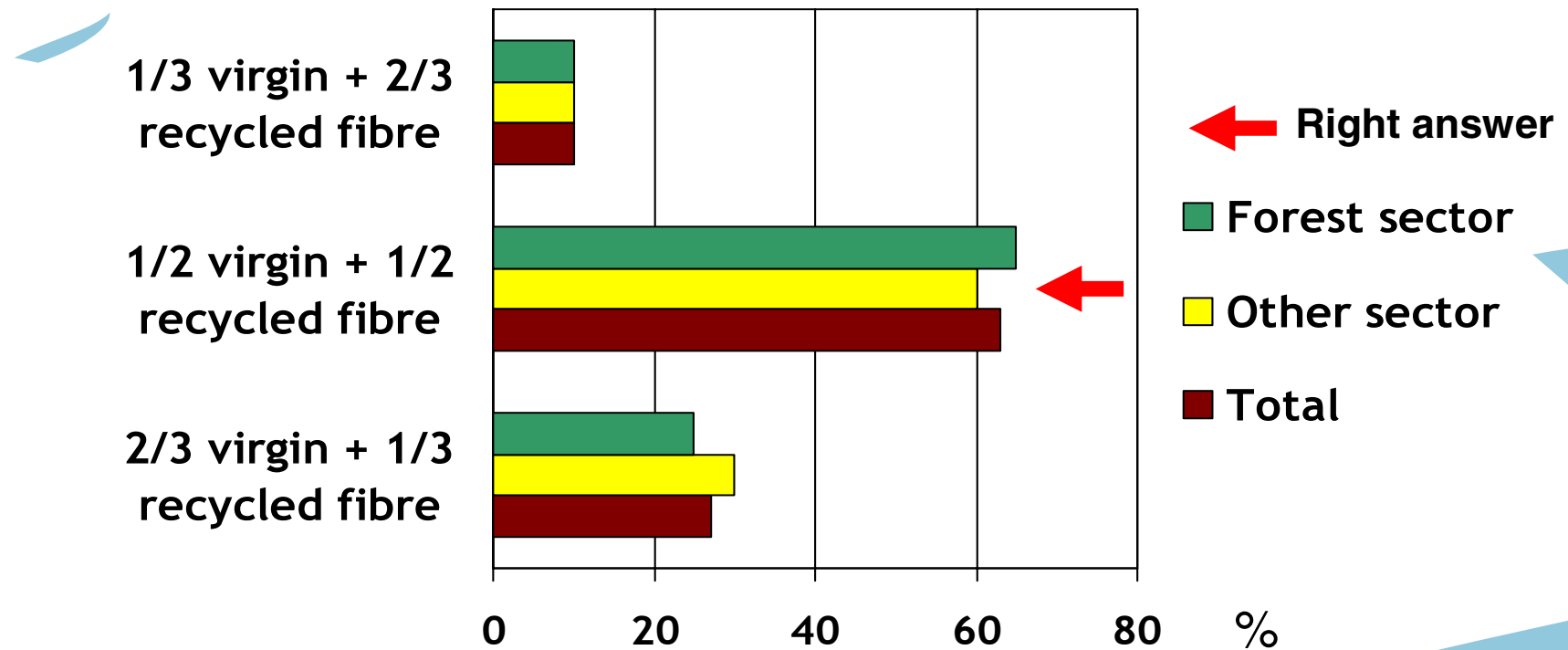
Participants' knowledge survey: B. Forest resources

6. In 2000, forest fellings / growth (annual net increment) in Europe (EU-25) was ...



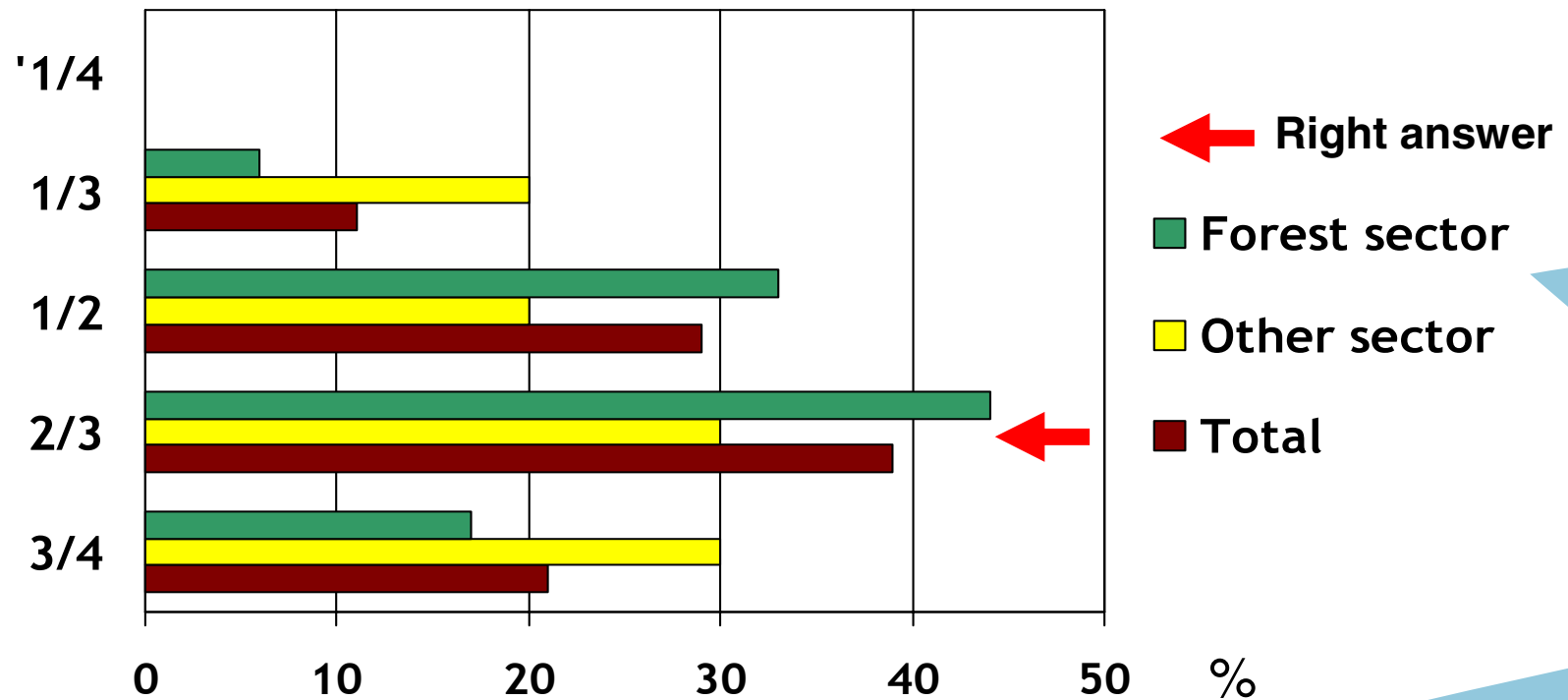
Participants' knowledge survey: B. Forest resources

7. European paper is made of ...



Participants' knowledge survey: B. Forest resources

8. How much of the European forests are privately owned?



Participants' knowledge survey: B. Forest resources

9. The share of forest certified for sustainable management in Europe is ...

