

FORESTS FOR ENERGY – ADVANCING SUSTAINABILITY IN THE BIOENERGY SECTOR

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&

IEA Bioenergy Task 43 ‘Biomass feedstocks for energy markets’

THE
FUTURE IS NOW.
decided



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 - Task 43 ‘Biomass feedstocks’ members:
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IEA Bioenergy's vision is to achieve a *substantial bioenergy contribution to future global energy demands* by accelerating the production and use of environmentally sound, socially accepted and cost-competitive bioenergy *on a sustainable basis*, thus providing increased security of supply whilst reducing greenhouse gas emissions from energy use.

<http://www.ieabioenergy.com/>



IEA Bioenergy

Task 43: Biomass Feedstocks for Energy Markets

Task 43 will address issues critical to ***mobilizing sustainable bioenergy supply chains***, including biomass markets and the social, economic and environmental consequences of feedstock production and supply.

The objective is to promote ***sound bioenergy development*** that is ***driven by well-informed decisions*** in business, governments and elsewhere.

<http://www.ieabioenergytask43.org/>

OVERVIEW

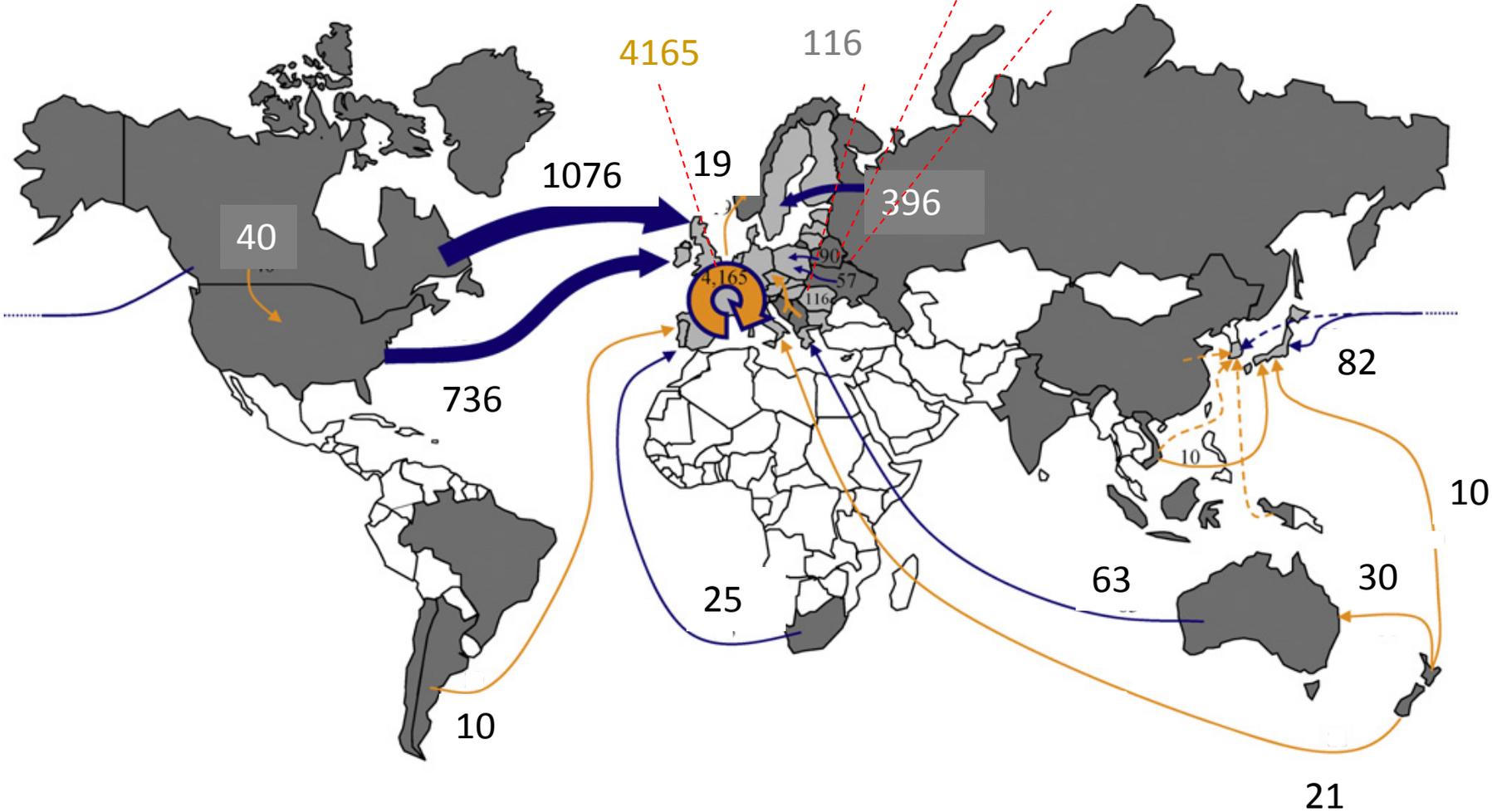
- Global bioenergy developments
- Developments in sustainable bioenergy governance
- IEA Bioenergy study on improving the effectiveness of governance and certification systems to benefit sustainable bioenergy deployment
- Some things to consider

GLOBAL BIOENERGY PERSPECTIVES

- *Deployment level of IPCC scenarios by 2050*
 - 440-600 ppm CO₂^{eq} target: 80-150 EJ/year
 - <440 ppm CO₂^{eq} target: 118-190 EJ/year
- *Present bioenergy*
 - Modern bioenergy: 10-15 EJ/year
 - Total bioenergy: 50 EJ/year
- *Present other biomass*
 - Industrial roundwood: around 15 EJ/year
 - Major agricultural crops: about 60 EJ/year.

GLOBAL WOOD PELLET TRADE STREAMS, 2010

10 k tonnes



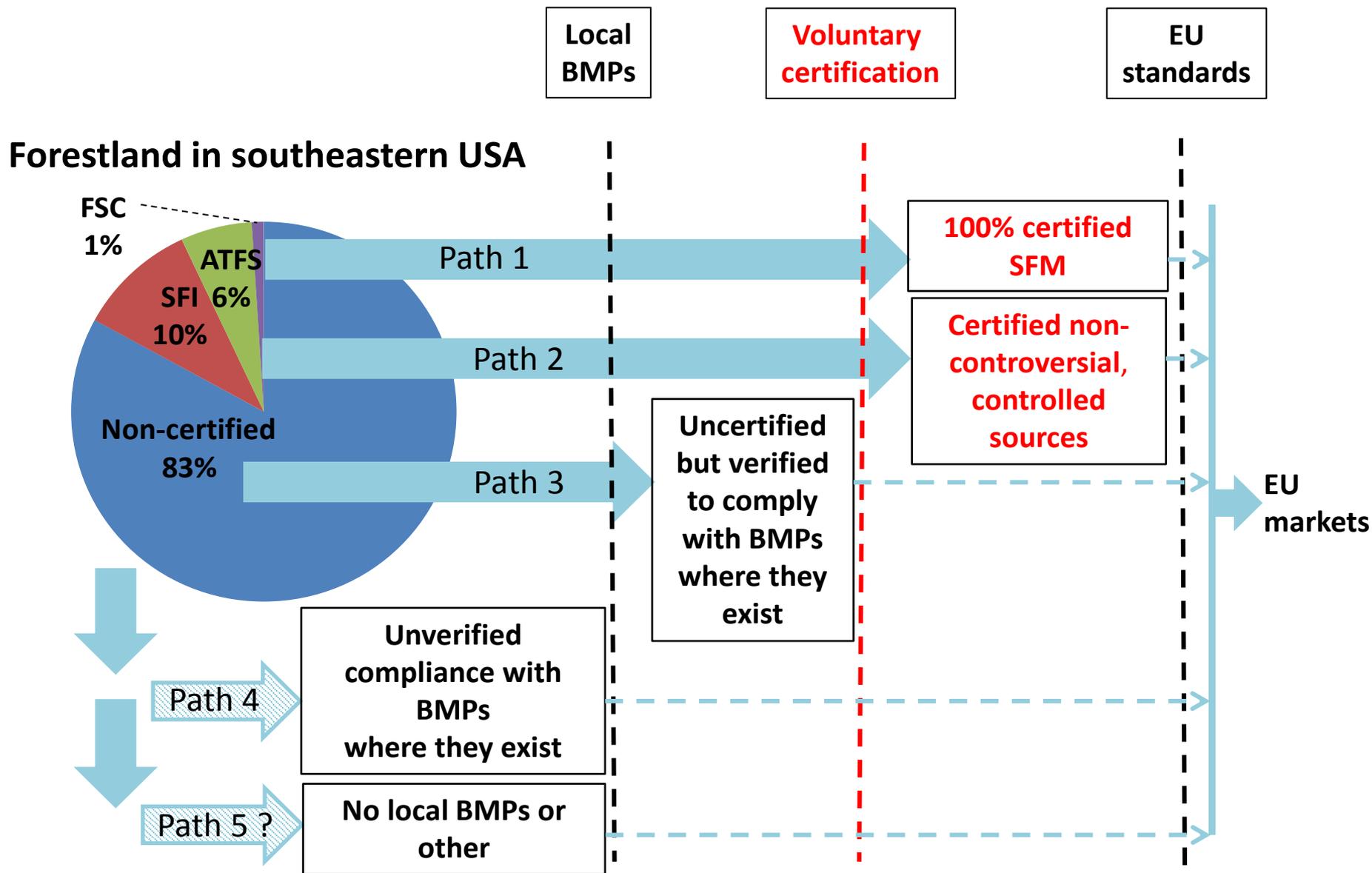
- ➔ Mainly industrial / brown pellets
- ➔ Mainly residential / white pellets

ENERGY & FORESTRY SECTORS

Convergent interests and issues

- Demand for biomass & bioenergy by energy sector
- Raw feedstock & energy supply by forestry sector
- Supply and value chain optimization
 - Coordination from forests to energy consumers
 - New markets
 - Communication & business involving new actors
 - Overall logistics, efficiency, cost, timing, storage
 - Ensure sustainability along whole supply chain
- Sustainability issues have high public priority
 - What standards (e.g. C&I) are adequate?
 - What mix of voluntary and mandatory approaches?
 - Certification
 - EU-RED
 - Will existing systems be accepted?

Multiple sustainability claims for exports to EU markets



Adapted from: Kittler et al. 2012

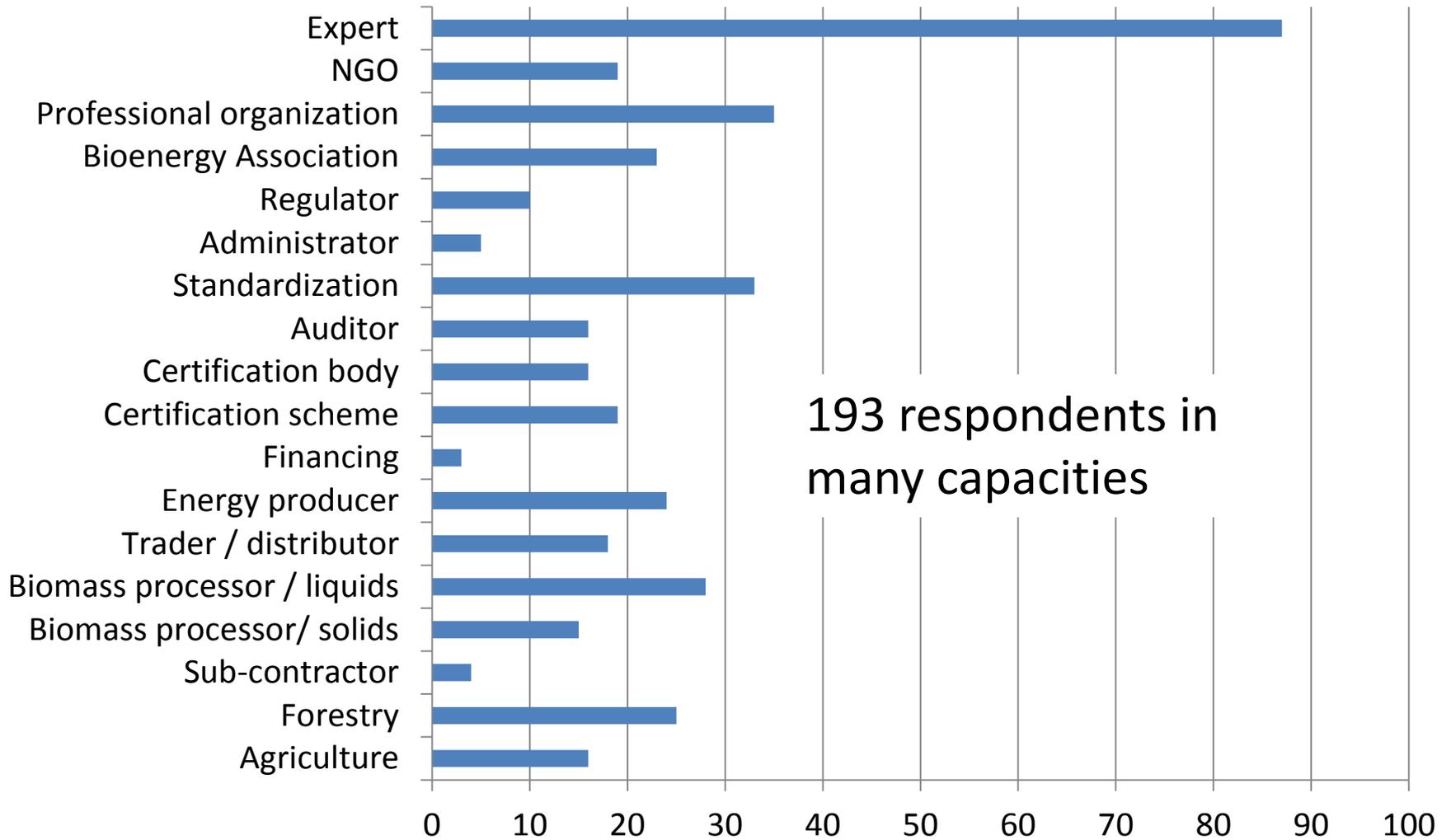
IEA BIOENERGY SURVEY

- Survey to evaluate options for *improving the effectiveness of governance and certification systems* for sustainable bioenergy deployment.
- Determine the *operational experiences* of people involved with all aspects of bioenergy production systems, including:
 - biomass feedstock production, conversion to primary and secondary biofuel and bioenergy products, markets and trade, as well as certifying organizations.
- Evaluate *how these sectors are affected by governance mechanisms*, including:
 - binding and voluntary standards, legislation, regulations and certification schemes.

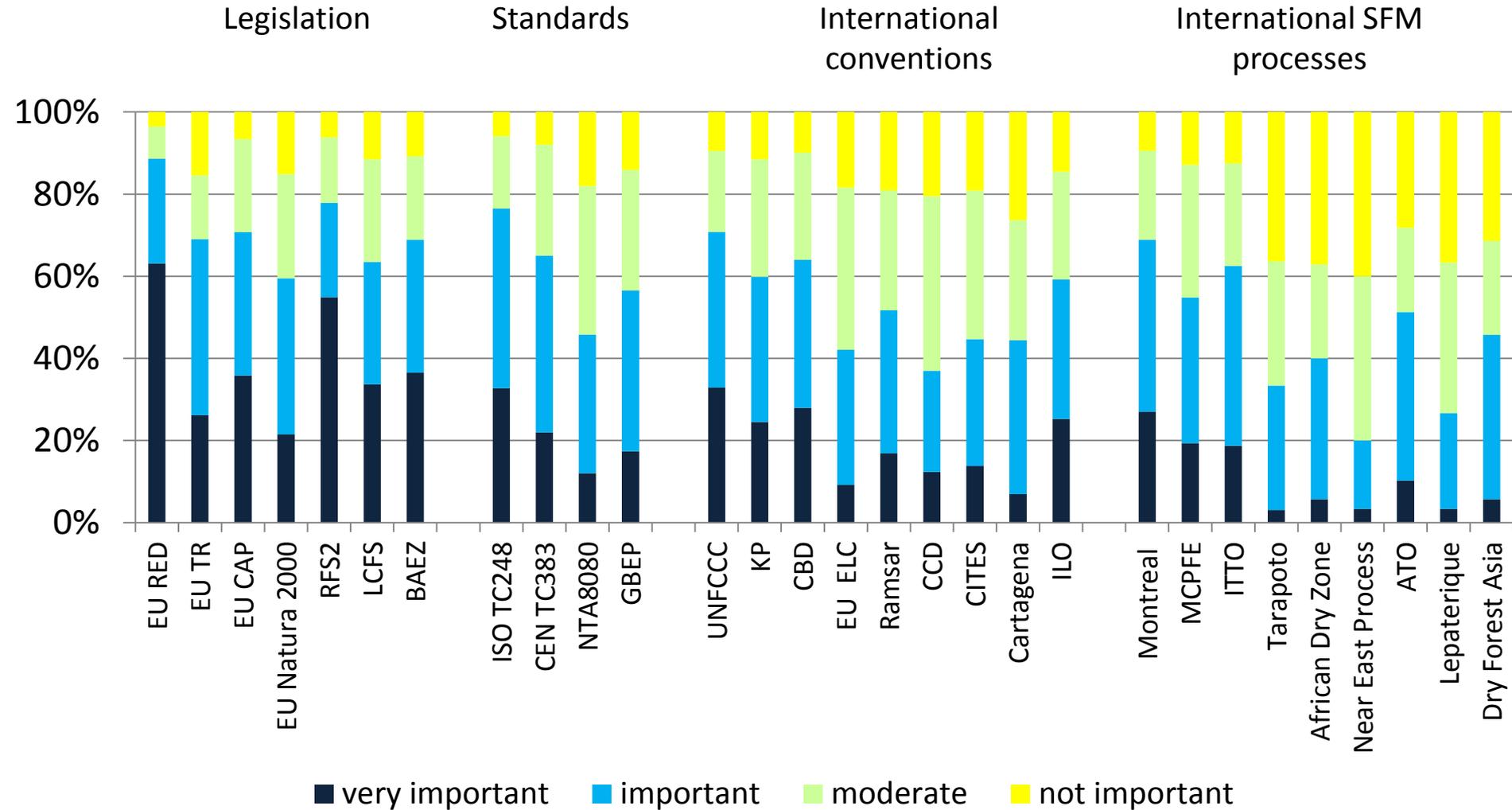
<http://www.surveygizmo.com/s3/936779/IEA-certification>

<http://www.bioenergytrade.org/ongoing-work/monitoring-sust-certification-of-bioenergy.html>

CAPACITIES OF THE RESPONDENTS



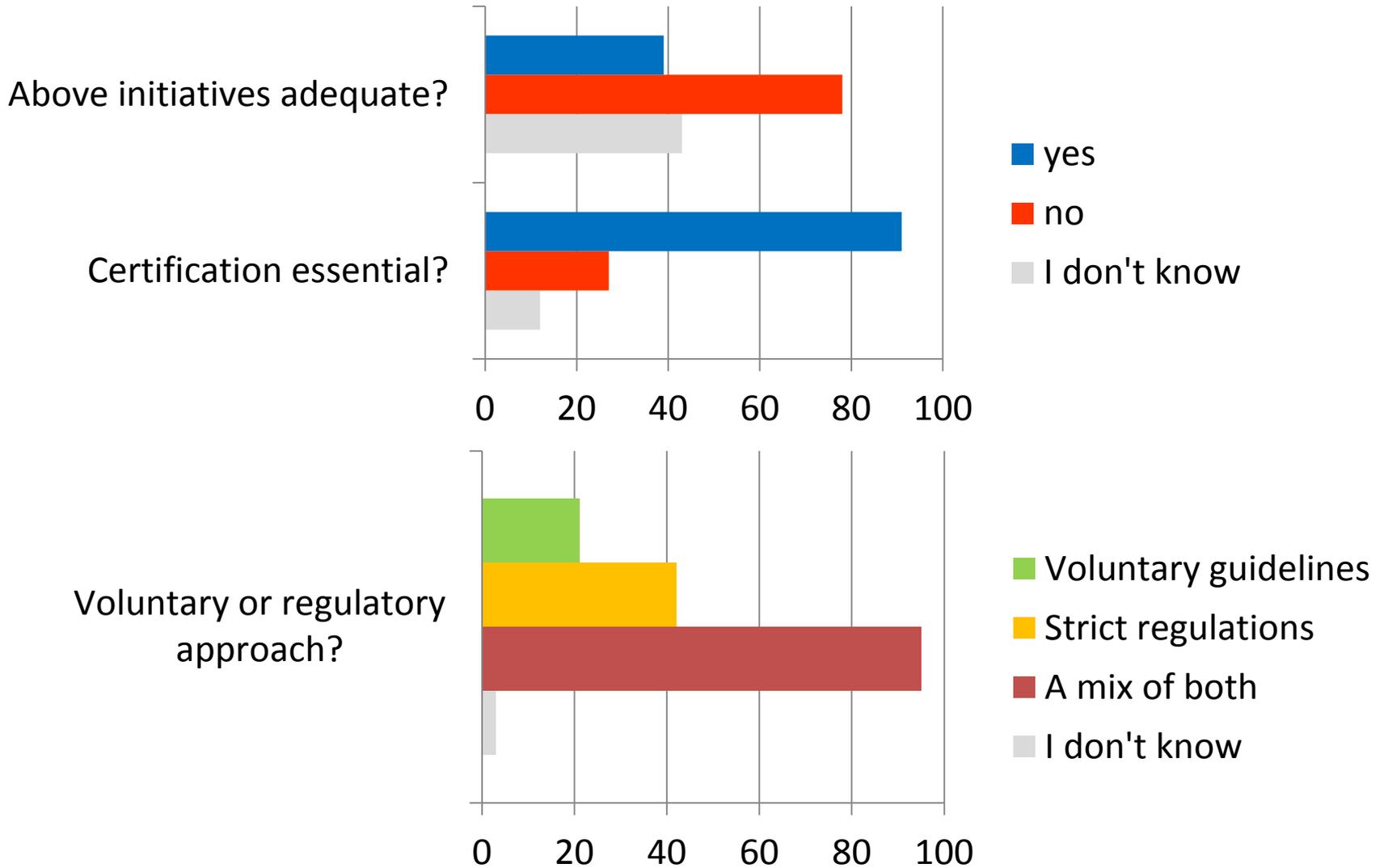
IMPORTANT INITIATIVES?



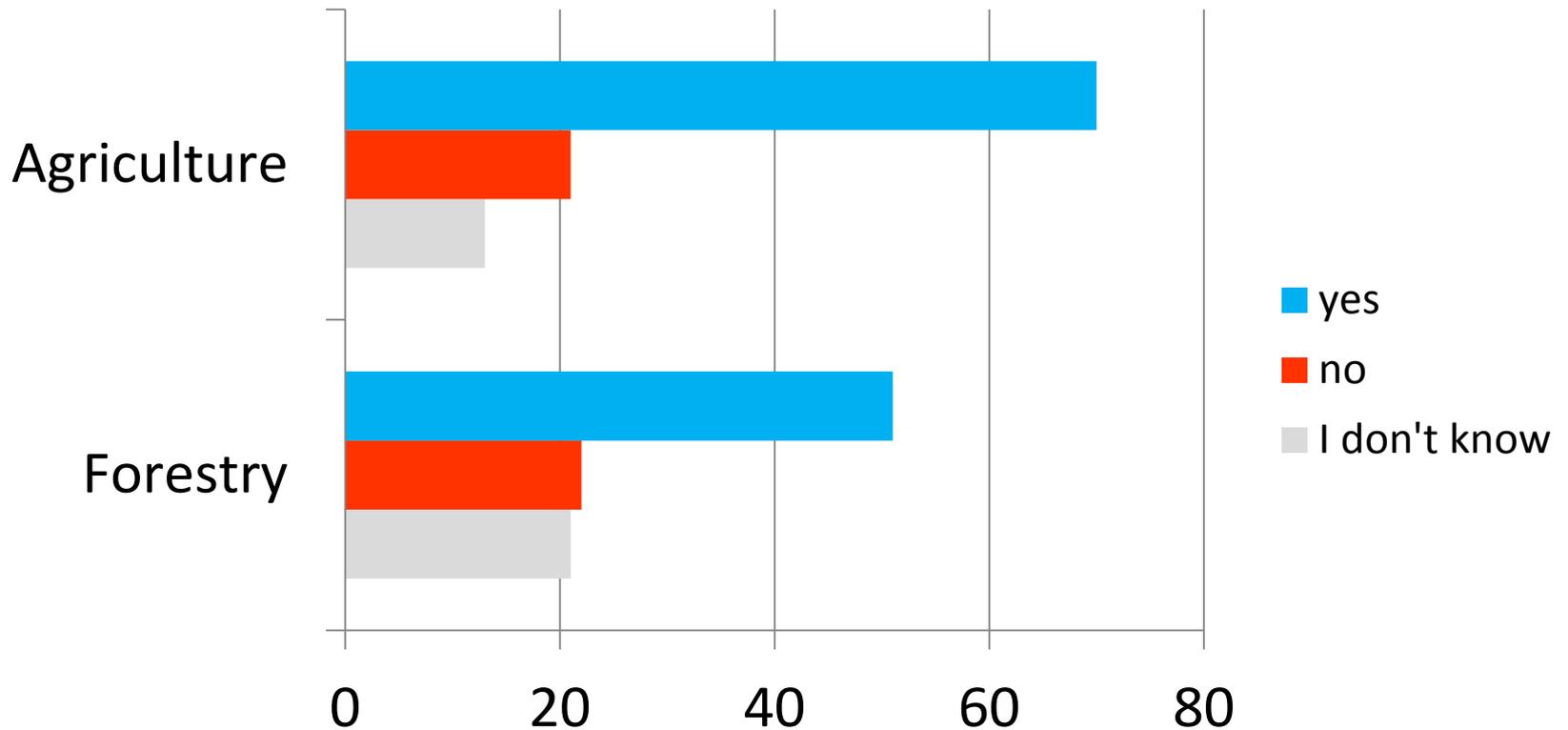
Note of importance:

- Absolute: **EU RED, RFS2, ISO TC 248, UNFCCC, KP**
- Relative: **Legislation (EU RED, RFS2 namely), ISO, CEN, UNFCCC, CBD, Montreal, ITTO**

THE ROLE OF CERTIFICATION?

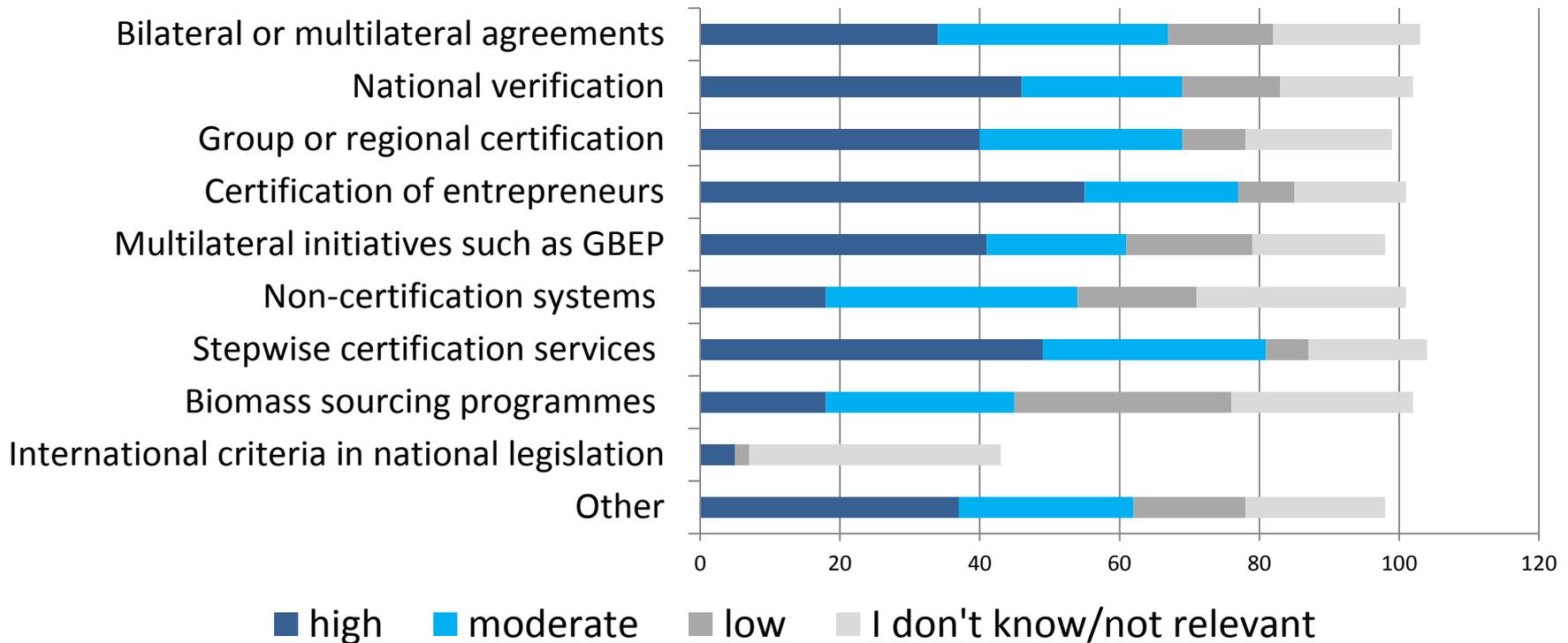


IS NON-CERTIFIED LAND A PROBLEM?



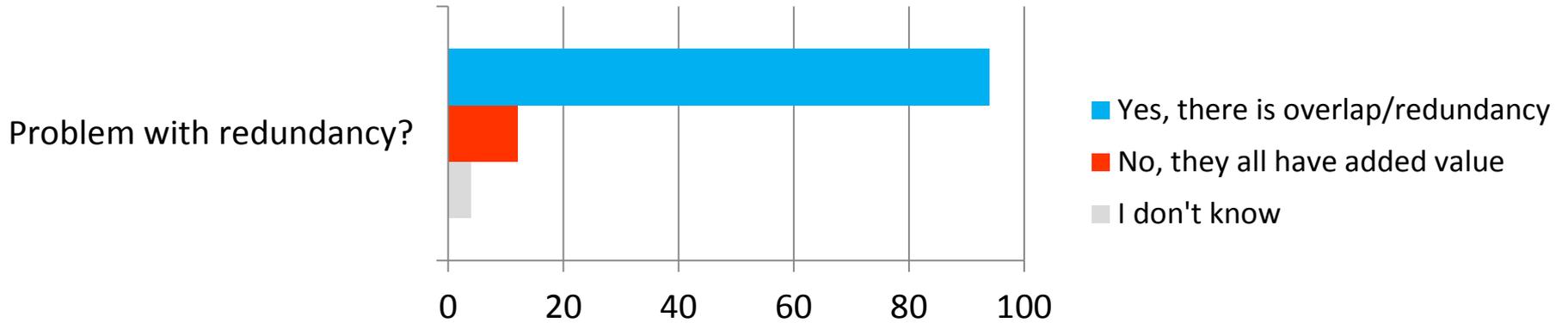
This question addresses the 'other 90%' issue

EFFECTIVENESS OF ALTERNATIVES TO CERTIFICATION?

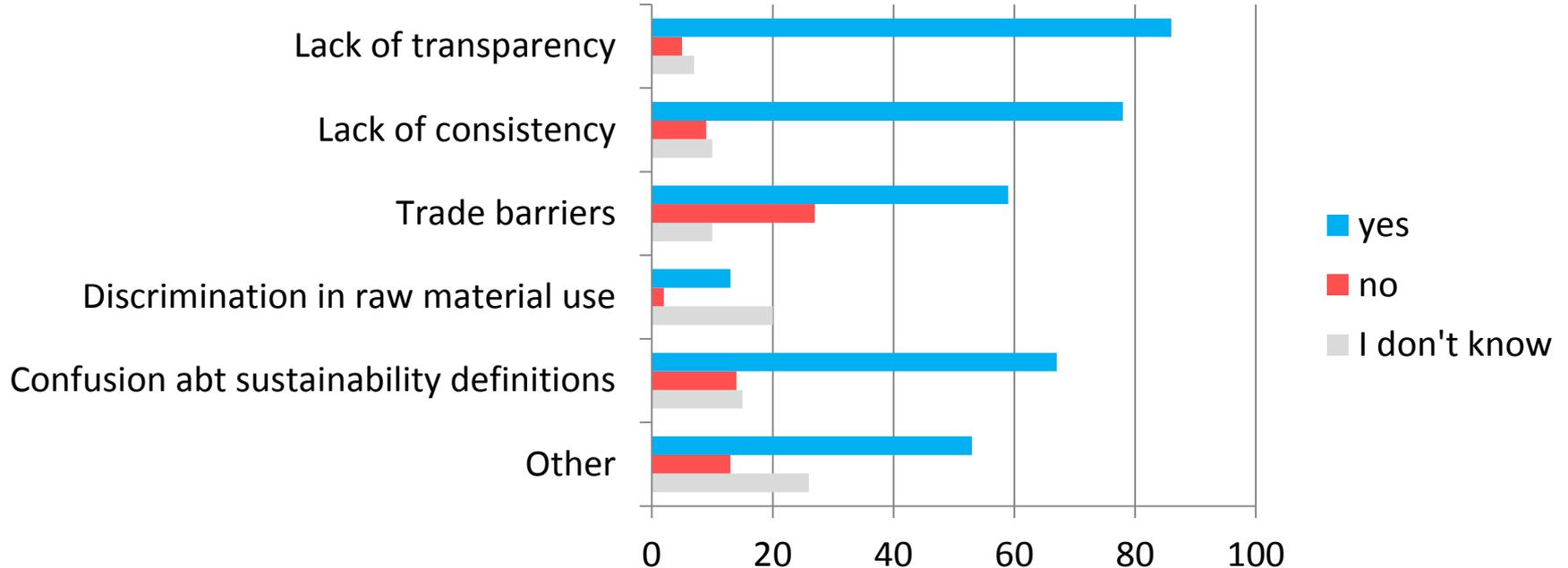


Note a mix of system approaches are considered effective

HARMONIZATION AND INTEGRATION?

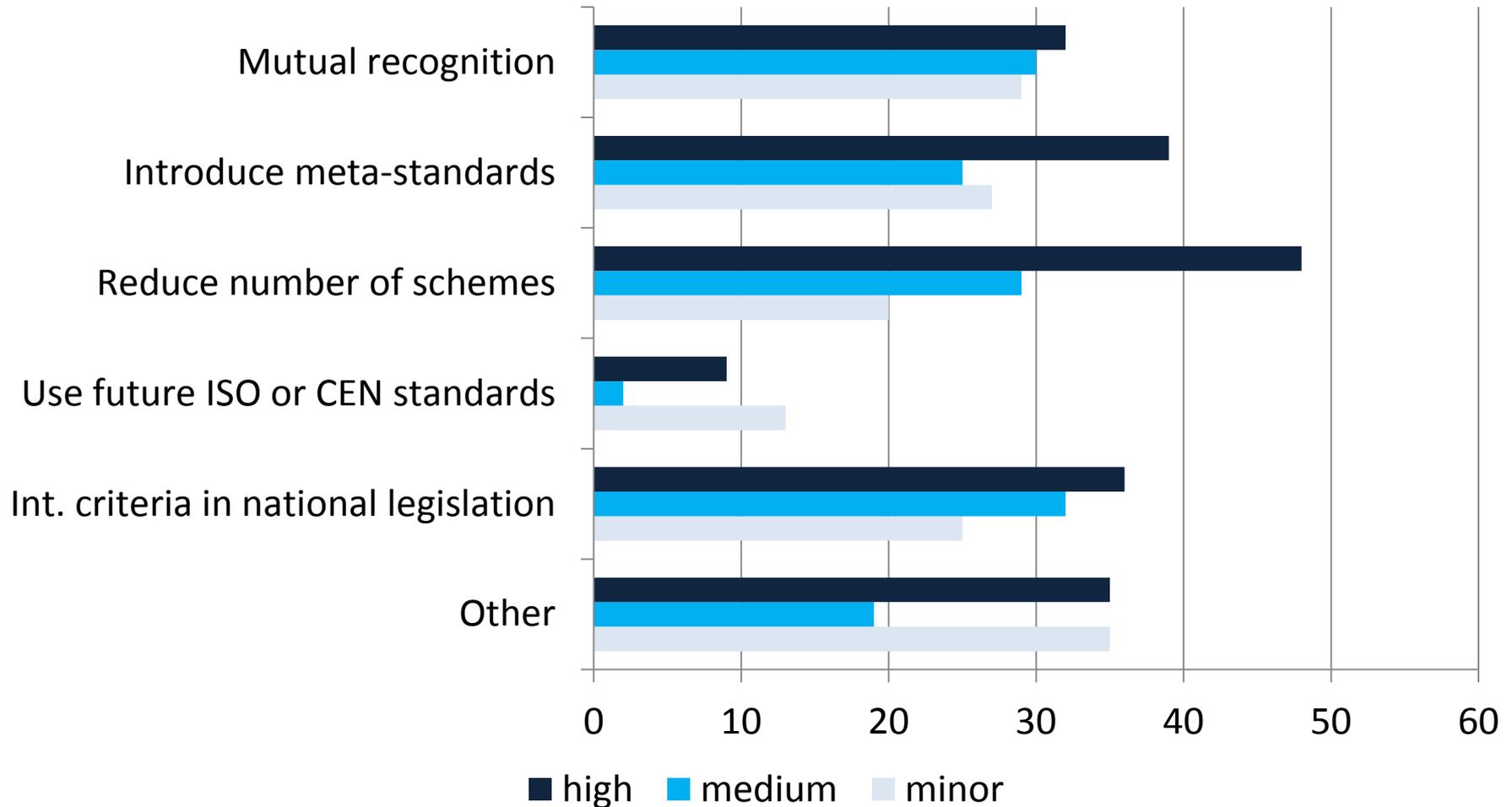


If yes, which problems....?

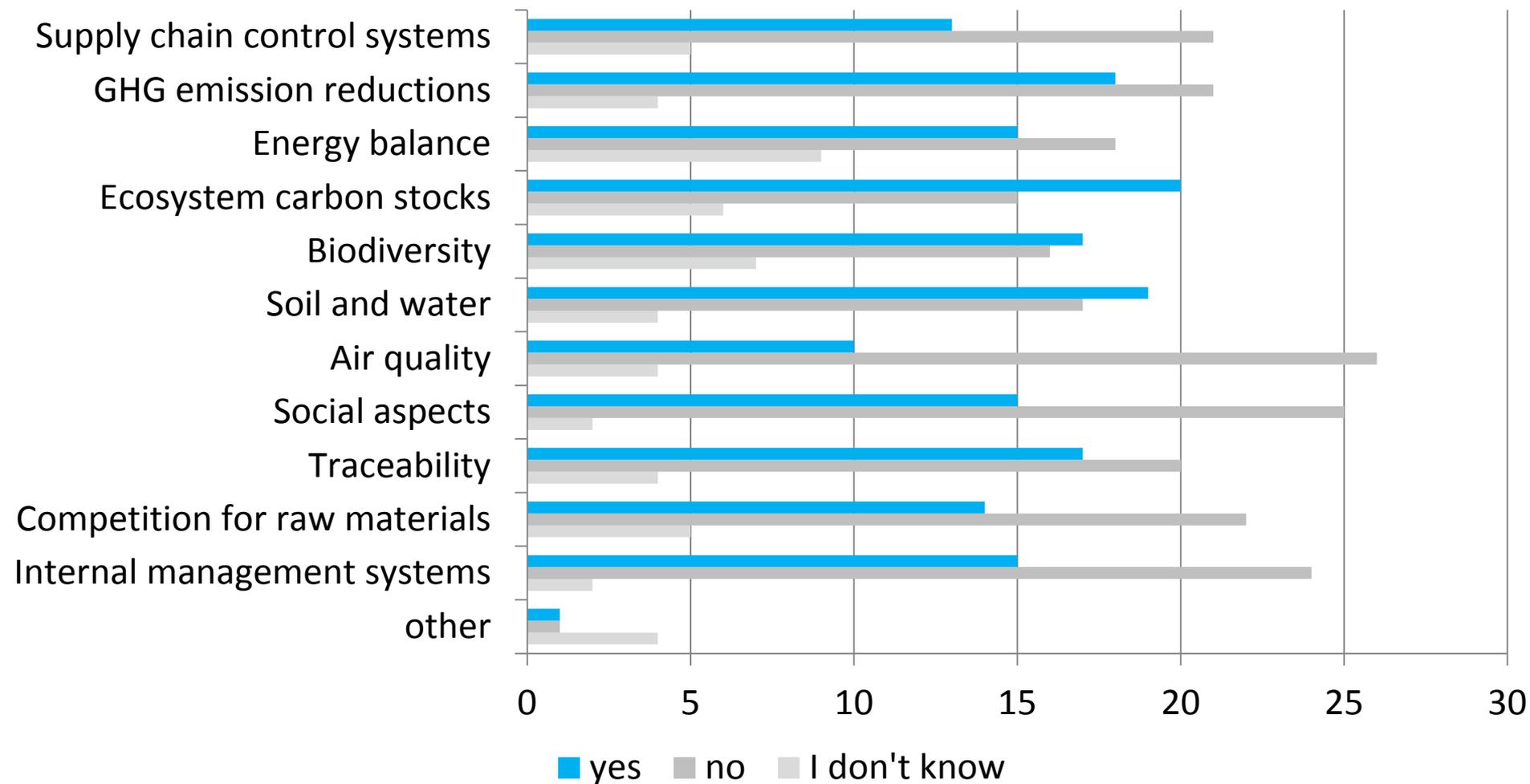


HARMONIZATION AND INTEGRATION

Solutions to redundancy?



NEED TO DEVELOP ADDITIONAL TOOLS AND GUIDELINES FOR VERIFICATION OF CRITERIA?



Note that new tools for estimating ecosystem carbon stocks are suggested 18

WHAT IS LACKING?

Example comments from respondents (1)

National legislation & monitoring and political commitment
versus
'Governments should not be involved'

Criteria - more focus on food security, iLUC, landscape level,
social aspects, trade-off between energy demand and
environmental values versus, GHG consensus
versus
*Stick to simple criteria -- we have enough in Europe and Northern
America; focus on deforestation*

WHAT IS LACKING?

Example comments from respondents (2)

Integration and harmonization

- Adaptation of existing initiatives to bioenergy
- Local adaptation of international criteria
- Coordination between assessments (local, national, international levels)
- Fewer schemes

SOME THINGS TO CONSIDER

- Forest management should be sustainable regardless of biomass end use
- Differing points of view along supply chain
 - Should forest landowners be held accountable for how their biomass is used?
 - Consider: biomass processors , energy producers, consumers
- Additional standards may be needed
 - Ecosystem carbon stocks, GHG balances
 - Value of default values?
- Mix of voluntary and mandatory schemes is suggested, but is also possibly confusing and of concern
- Consider ‘harmonization’

Thanks!

Questions?

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