



“Promoting sustainable building materials and the implications on the use of wood in buildings: a review of leading public policies in the UNECE region”



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Brantwood
consulting

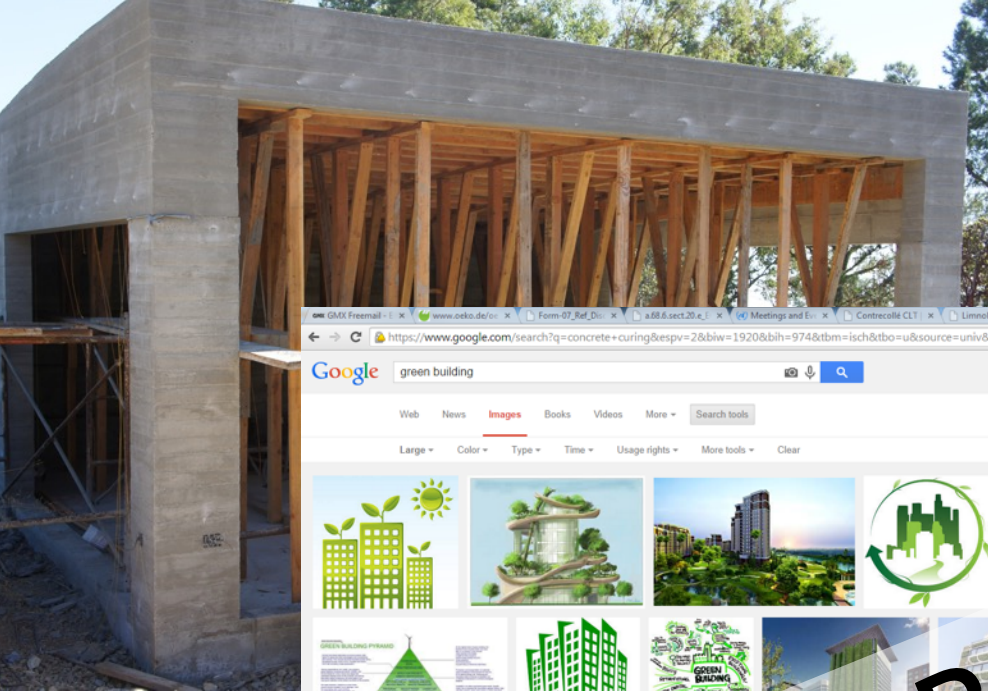




OUTLINE

- Background
- Purpose of the study
- Method
- Preliminary findings
- Timeline
- Next steps





Google search results for "green building".

Search results include various images and infographics related to green building, such as:

- Images of green buildings and sustainable architecture.
- Infographics showing "Average Savings of Green Buildings":

Carbon Footprint	35%
Water Use	40%
Energy Use	50%
Solid Waste	70%
- Infographic titled "Categories of Green Building Products That Are Expected to See Growth in the Next Five Years":

Water Management	47%
Energy	47%
Building Automation	47%
Waste Management	47%
Paints	38%
Furniture	38%
Lighting	38%
Acoustics	38%
- Infographic titled "Green Building Trends".
- Infographic titled "What is 'green building?'".
- Infographic titled "Green Building Cycle".

“GREEN” BUILDING ???





PURPOSE OF THE STUDY

1. Develop a succinct overview of the current policy environment regarding the use of sustainable construction materials and wood in UNECE region
2. Provide commentary on the effectiveness of such regimes in driving the adoption of sustainable construction materials
3. Discuss the contribution of wood products in achieving sustainable building goals
4. Gauge level of activity across leading countries in ECE region
5. No full inventory





METHOD

1. Online survey (July - September 2014)
2. Directly sent to 8000 contacts
 - Committee on Housing and Land Management
 - Committee on Forests and the Forest Industry
3. 38 questions (multiple choice and open questions)

UNECE-FAO Sustainable Building Materials Policy Study Questionnaire

Policy in effect today

28%

4. Please tell us about the leading policy in your region which promotes sustainable construction materials and/or the use of wood in buildings:

Policy name or title

Weblink (URL)

Date the policy came into effect

Applicable region, country

Name of the authority having jurisdiction (department or agency which oversees the policy)

Applicable building type or use

5. Provide a brief description of the policy.

6. What are the primary motivations for the development of the policy? (Check all that apply)

Support GHG emission reduction and/or climate change policies

Reduce environmental impacts of construction materials (embodied energy, water, waste, etc.)

Promote a local wood economy and culture

Other



SURVEY RESULTS

1. 100 responses from 33 different countries;
2. Initial list of 27 policies and programmes identified through a comprehensive web search
3. Six policies selected for detailed study that highlight leading practices across the materials life cycle



Thanks for completing this survey.

Survey Results

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Results for open-ended questions are not displayed.



FINDINGS

Many countries have programmes and policies in place.

- 42% of survey respondents have at least one policy in effect today
- 15% have a policy in development which they expect to implement in the next two years.



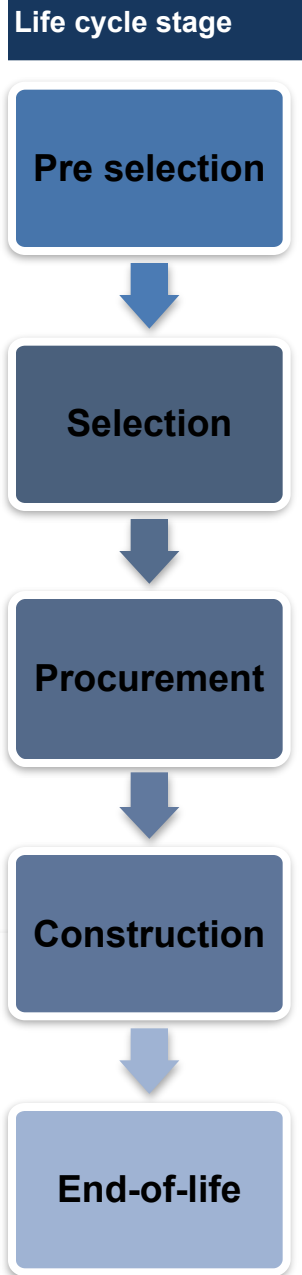


FINDINGS

The primary motivation for these policies are:

- Support GHG emission reduction and/or climate change policies,
- Reduce environmental impacts of construction materials (embodied energy, water, waste, etc.), and/or
- Promote a local wood economy and culture.





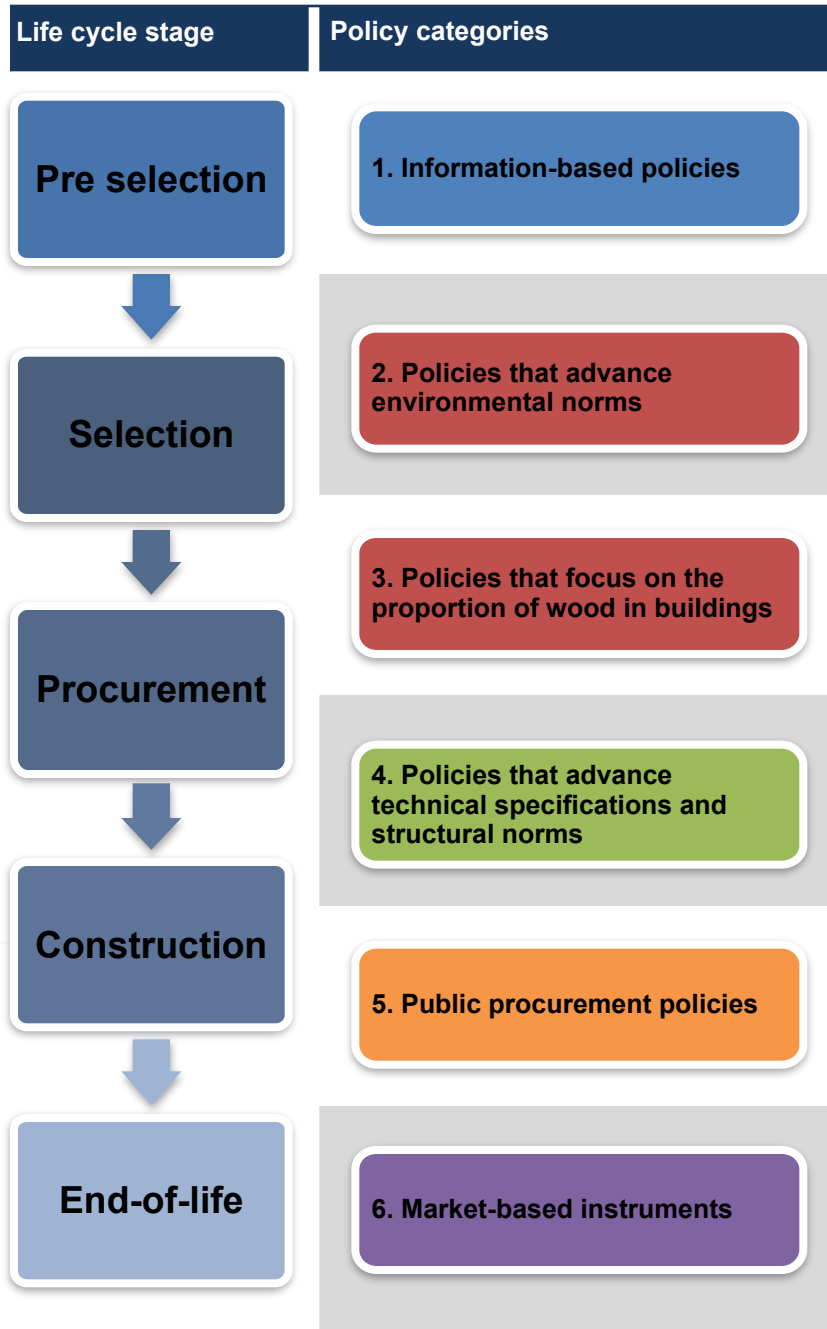
FINDINGS

Prescriptive approach dominates *policies in place*

(use certain materials, impose bans on certain materials, stipulate quantities of certain materials types, or favour materials with particular properties)

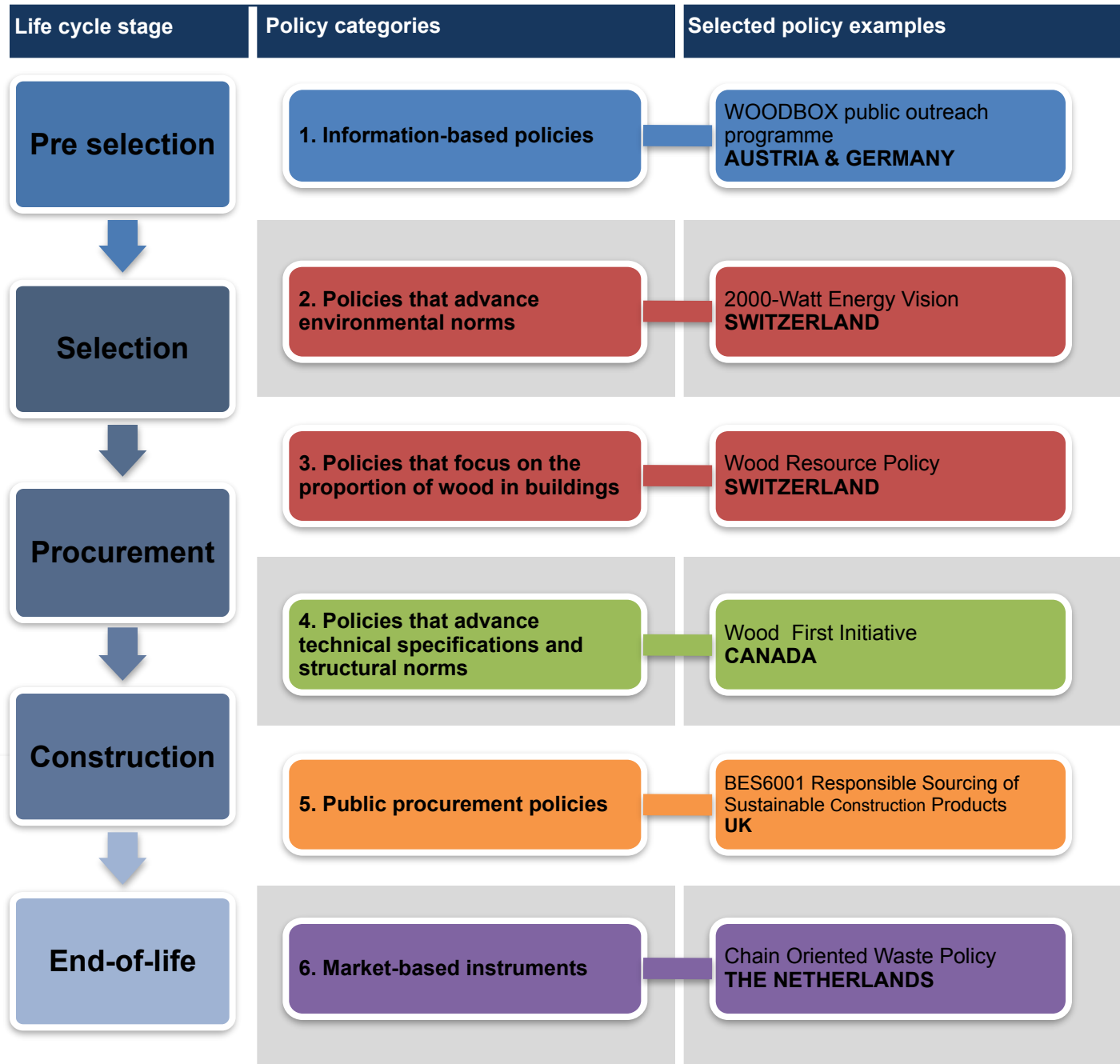
BUT: there is a shift towards:

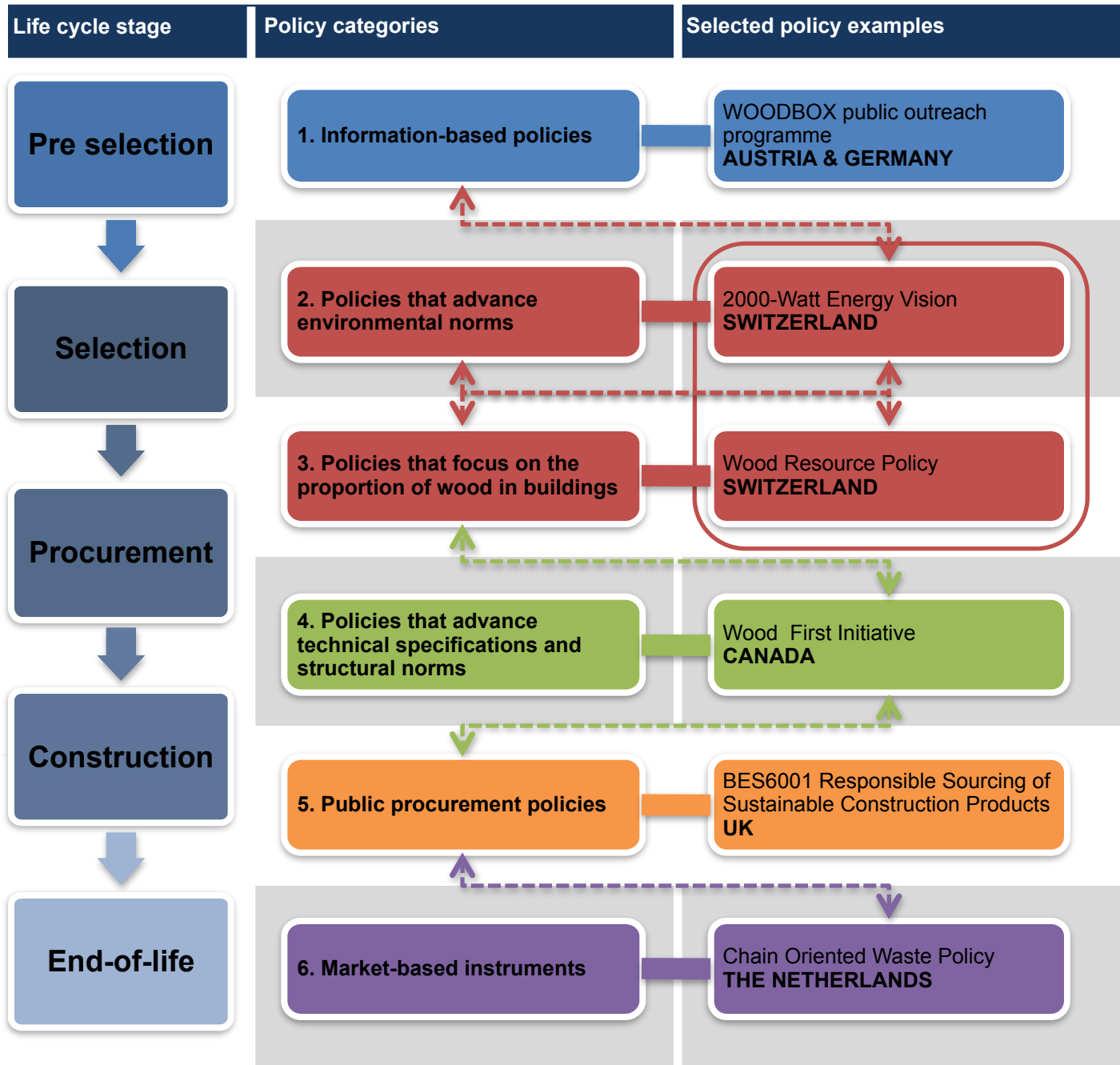
- Integrated, cross-cutting performance based policies that address more than one life cycle stage
- Adoption of life cycle assessment (LCA) as the tool of choice in evaluating the environmental impacts of materials
- Recognition of wood as a low carbon material



FINDINGS

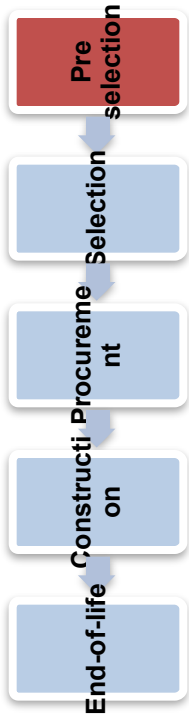
Information on 28 policies selected to highlight leading practices



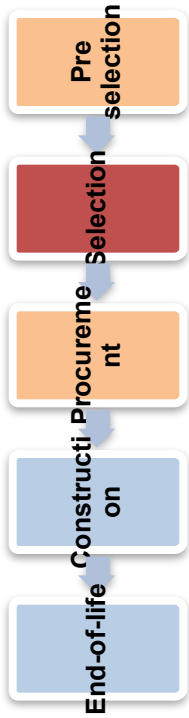


Policy 1. WOODOBOX & WOODOBOXES GERMANY & AUSTRIA

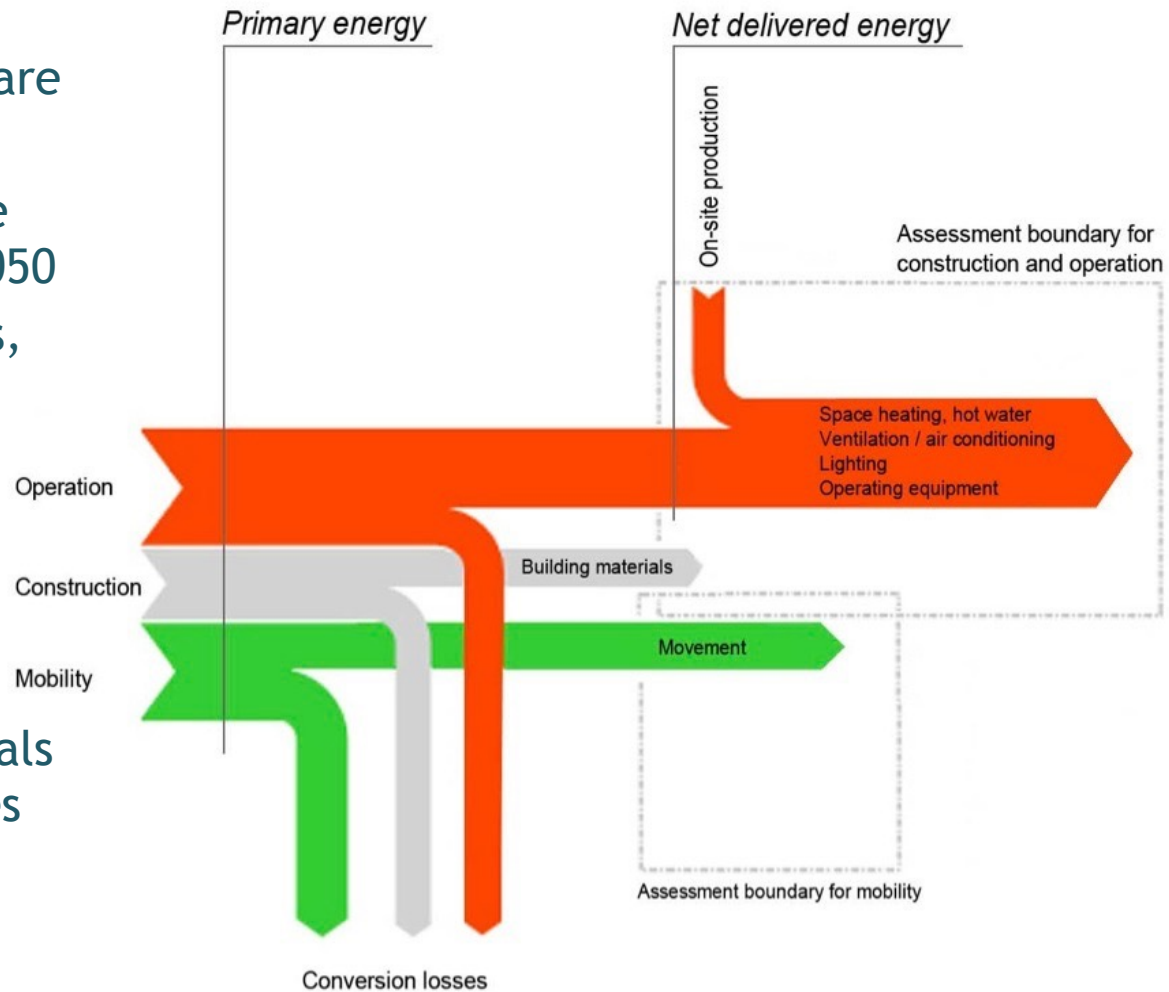
- An integrated public outreach programme
- Aims to build public awareness of the impacts of construction materials and the benefits of using wood
- Promotes modern methods of construction (pre-fab, etc.)
- 15,000 visitors in five locations (Milan, Brussels, Ljubljana, Bratislava, Klagenfurt)
- Plus full exhibition in Vienna



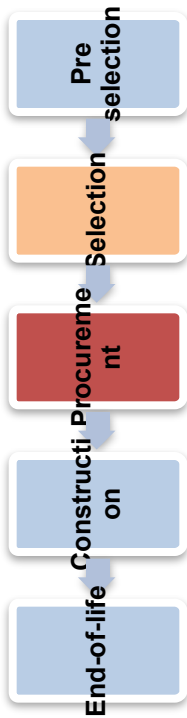
Policy 2. 2000-Watt Society SWITZERLAND



- In-use and embodied energy/CO₂ impacts are regulated
- 2000 Watts & 1 tonne CO₂ per person by 2050
- Complex but rigorous, requires LCA
- Builds on extensive experience in low-carbon, design, construction and reporting
- Informs other materials and resources policies
- 70% Zurich residents voted in favour

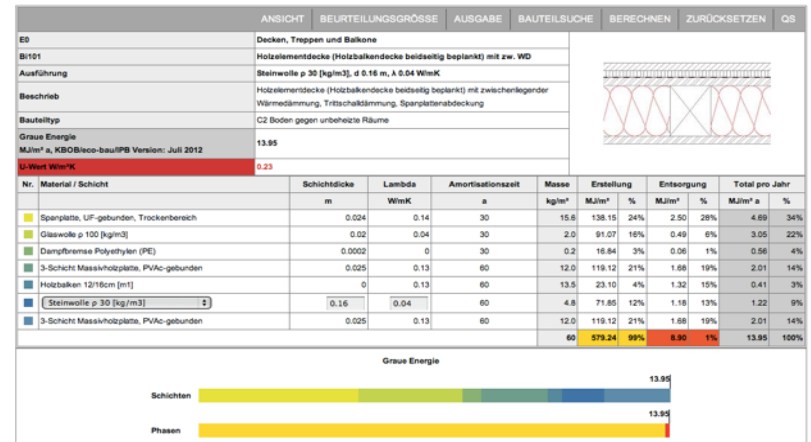


Policy 3. Wood Resource Policy SWITZERLAND

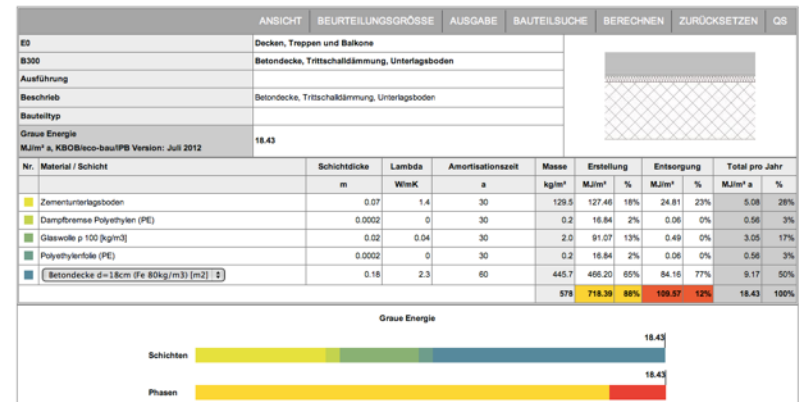


- Clear measurable standards and targets
- Cross-cutting mechanism promotes use of wood as a way to reduce embodied energy / CO₂ in buildings
- Supports 2000-Watt Society while increasing opportunities for local wood industry.
- At least 50% increase in the wood content in the entire Swiss building stock (new buildings) by 2020

Wood floor system - 13.95 MJ/m²yr

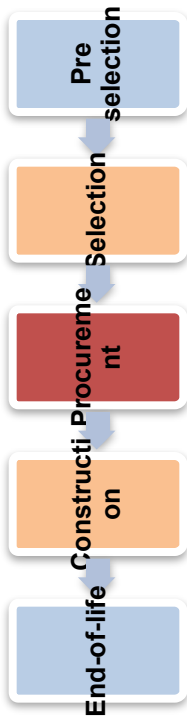


Concrete floor system - 18.43 MJ/m²yr



Policy 4. Wood First Policy

CANADA (B.C. & QUEBEC)

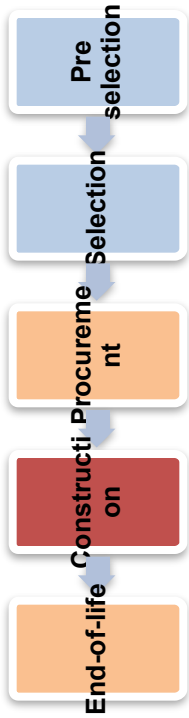


- Facilitates the uptake of wood products in new and innovative situations
- Stimulates research into new techniques and technologies
- Market catalyst
- Develops small local markets as “shop-windows” of wood innovation for primary overseas markets.

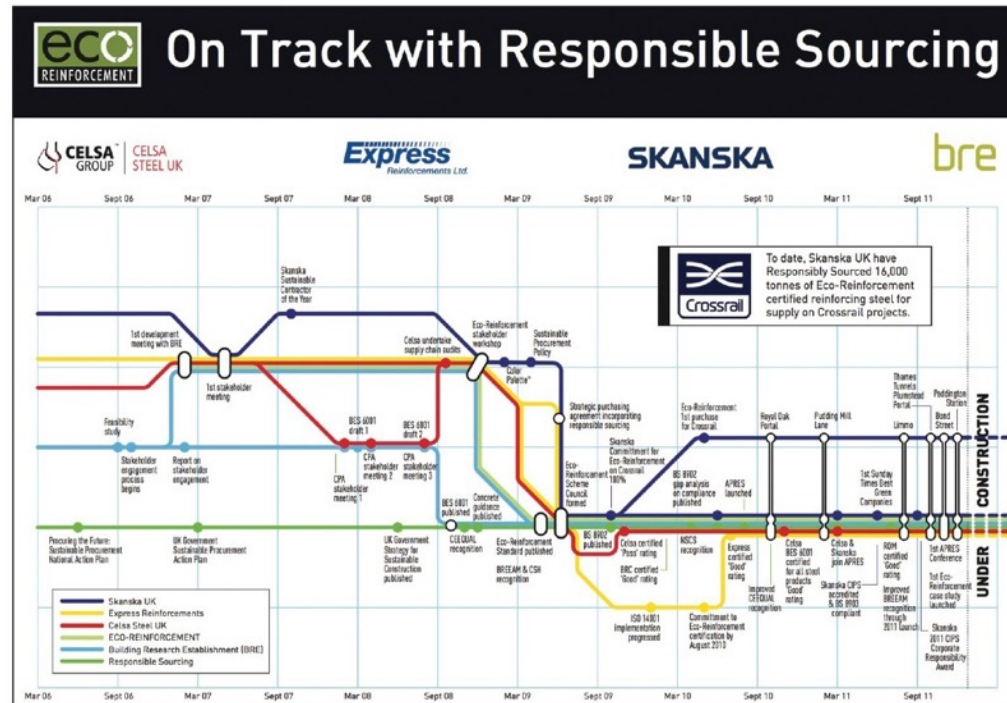


18 storey wood residential tower proposed for University of B.C, Canada

Policy 5. BES6001 Sustainable Sourcing of Construction Products UNITED KINGDOM



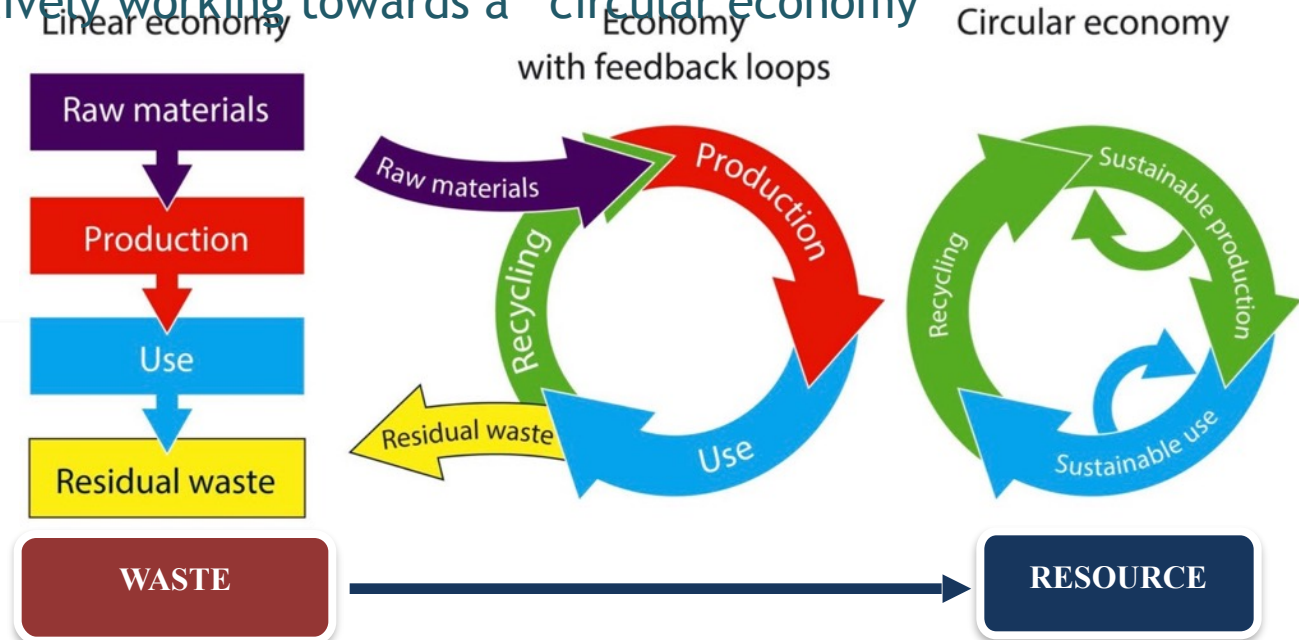
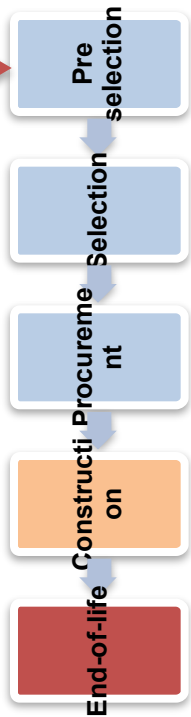
- Developed by BRE
- Requires range of life-cycle criteria to be met
- EPDs needed
- Potential to influence entire life-cycle of materials
- Steel reinforcing pilot - can be applied across all major materials
- Major project offers immediate economy of scale



Policy 6. Chain-Oriented Waste Policy

THE NETHERLANDS

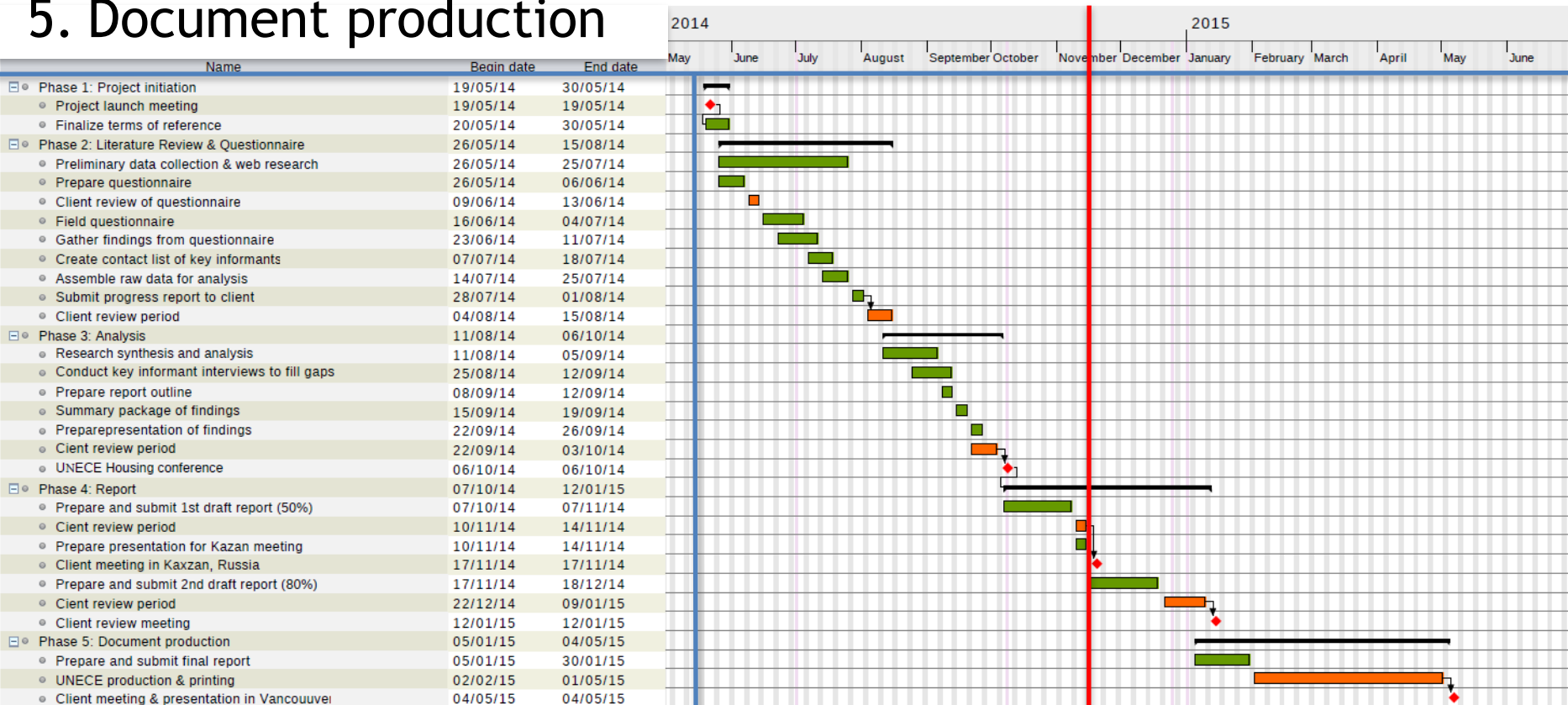
- Highest landfill taxes in Europe @ €107.49 per tonne
- Achieved 95% recycling and recovery rate for C&D waste - what's next?
- Considers entire material chain, including all stages in product's life cycle from raw material mining, production and use, to waste and possible recycling, as opposed to concentrating on "end-of-pipe" solution
- Focus is on reducing overall environmental pressures
- Actively working towards a "circular economy"





TIMELINE

1. Project initiation
2. Literature review and questionnaire
3. Analysis
- 4. Report (50% complete)**
5. Document production





NEXT STEPS

80% complete draft will be submitted mid December 2014

Consultation with member states

Final document will be ready for printing in January 2015.

Publication will be in March 2015





Thank you for your attention.



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