



Green skills and vocational training strategies in the building sector

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Sustainable Real Estate Development and Green Skills:

a Swiss-Czech comparative perspective

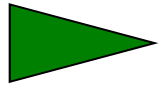
17 and 18 March, 2011

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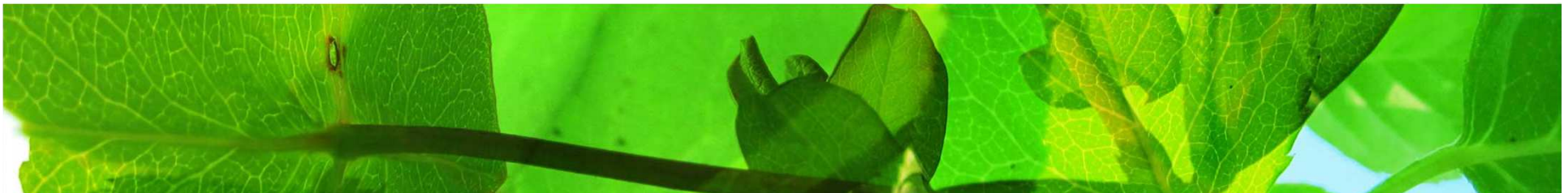
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Overview

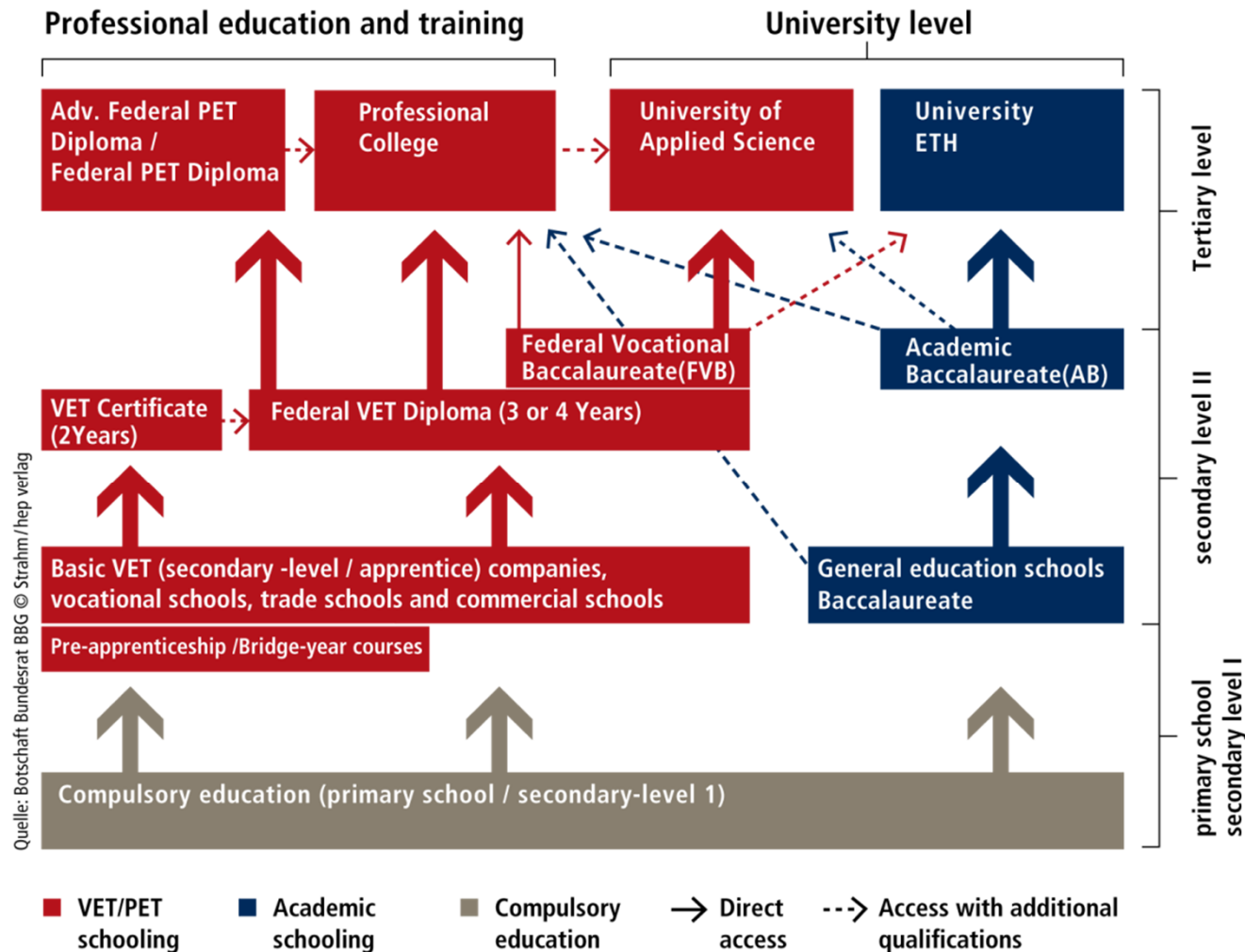


1. Education system in Switzerland

1. Value chain of sustainable real estate market
2. Examples of individual professions
3. Research, innovation and market
4. Special legislation and economic programs
5. Conclusion



Education system in Switzerland



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Green skills strategy at all levels of the education system for professionals and decision makers

UNECE Strategy for Education for Sustainable Development 2005-2014:

“ESD has to be considered as a life-long process. It should permeate learning programmes at **all levels, including vocational education, training for educators, and continuing education for professionals and decision makers.”**

19 Building Professions
Federal PET Diploma: e.g.

- Master builder
- Master roofer
- Master painter
- Master plumber
- Master timber construction
- Master heating installer

BSc./MSc. in Professional College:

- Architect
- Construction Engineer
- Facility Management

MAS/CAS:

- Sustainable Construction
- Solararchitecture

BSc./MSc. in University:

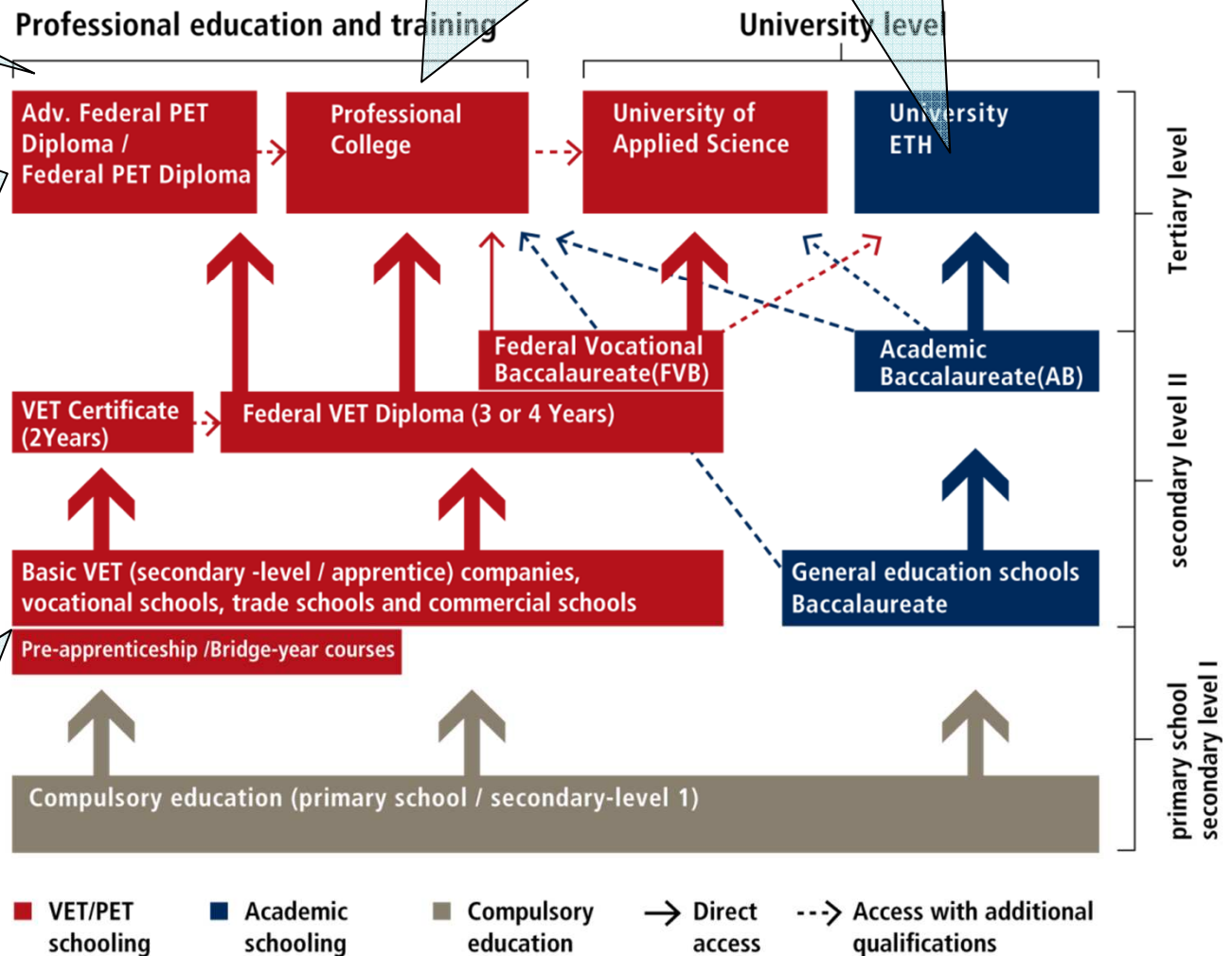
- Architect
- Civil Engineering
- Environmental Engin.
- Geomatics & Planning
- Spatial Development & Infrastructure Systems

27 Building Professions
Adv. Federal PET: e.g.

- Ecological Construction
- Energy Consultant
- Real Estate Trustee
- Refrigeration engineer
- Foreman plumber
- Foreman Construction
- Caretaker

9 Building Professions Basic
VET: e.g.

- Plumber
- Electrician
- Heating installers
- Roofer
- Draftsman



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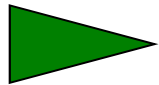
Green skills strategy requires multi-stakeholder cooperation and partnership.



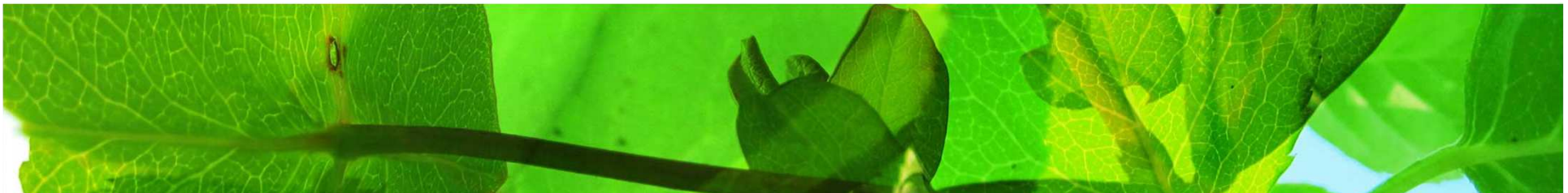
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Overview

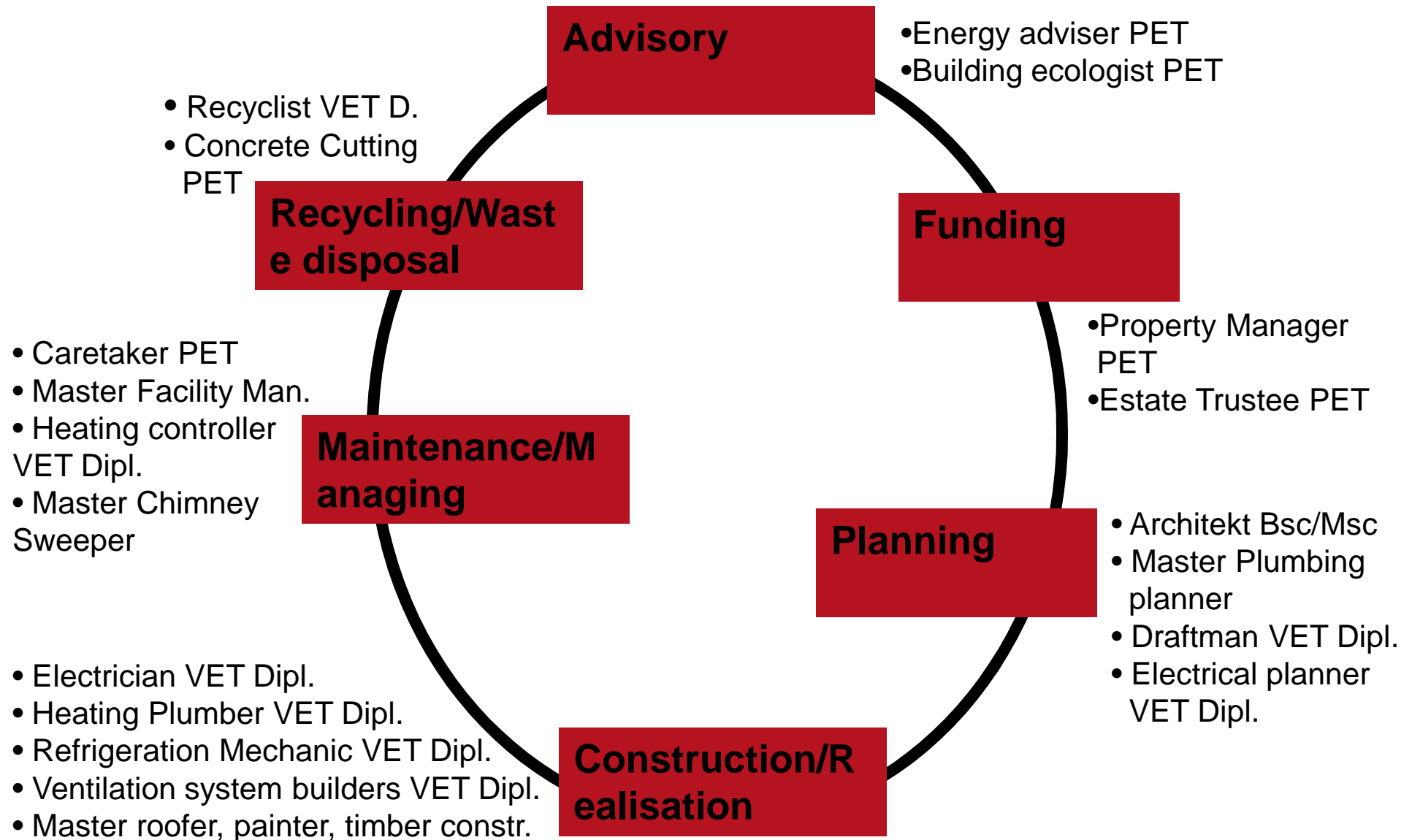
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- 1. Professions along the value chain of the real estate market**
2. Examples of individual professions
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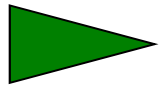
National Program „Energy knowledge“: Green Skills along the value chain of buildings



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Overview

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1. Professions along the value chain of the real estate market



2. Examples of individual professions

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Example 1: Electrician

Professional Profile

Electricians VET Dipl. Are responsible for all electrical installations in domestic, agricultural, commercial and industrial. They install the connections for electricity, telephone, Internet, radio and television

Green skills response

- Advice on energy-efficient services and products (household appliances, lighting and stand-by)
- Sale of energy efficient planning services (for example solar thermal energy for the washing machine, dish washer, bathroom)
- Optimum setting, including the efficient use of energy technology
- sound knowledge of eco-friendly materials



Example 2: Master and foreman plumber

Professional Profile

The chief sanitary installer for the entire technical and administrative management responsible for the installation of sanitary facilities - from material purchasing to final inspection of the work.

Green skills response

Contribute through the Promotion of renewable energies to an environmentally friendly building:

- Planning and installation of solar systems, heat pumps or biomass plants
- Application of solarthermics for home appliances and hot-water boiling
- Consumer and landlords advise, including price performance ratio and the economic benefits.



Example 3: Foreman and Master Builder

Professional Profile

The Foreman and Master Builder are responsible for the organization, guided tours, control and administration of individual contracts in gardening and landscaping, construction, wood construction, civil engineering and traffic routes.

Green skills response

- Planning and Advise

Create and advise for the customer clear, transparent, feasible and attractive offers, including regarding environmental and sustainable design and design variants.

- Construction

Organize the service and maintenance work on infrastructure, equipment and supplies ecologically

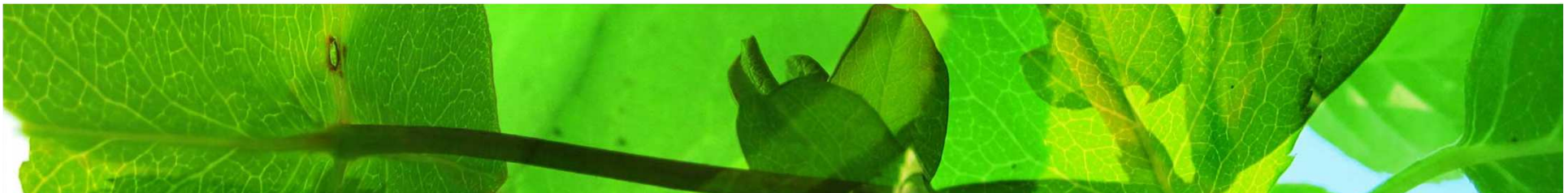
- Controlling and Coordination

Quality Control over sustainable building standards

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Green Innovation in the building sector as process of science, innovation and market



Basic research



Applied reserach



Prototyping



pilot project



market implem.



exports

Knowledge and Technology Transfer



brenet

Building and Renewable Energies Network of Technology

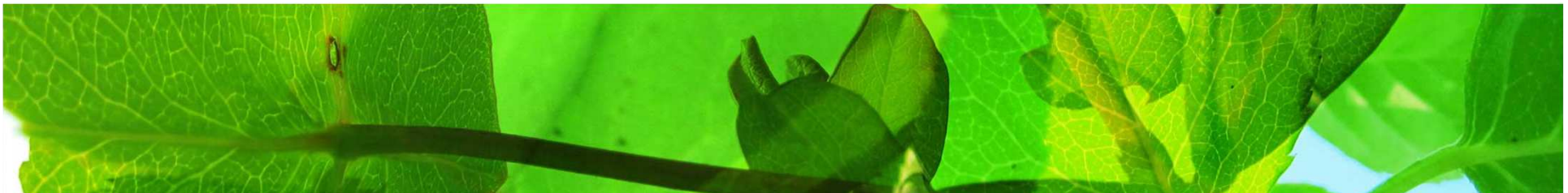
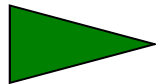
Innovation-Bonus for SME



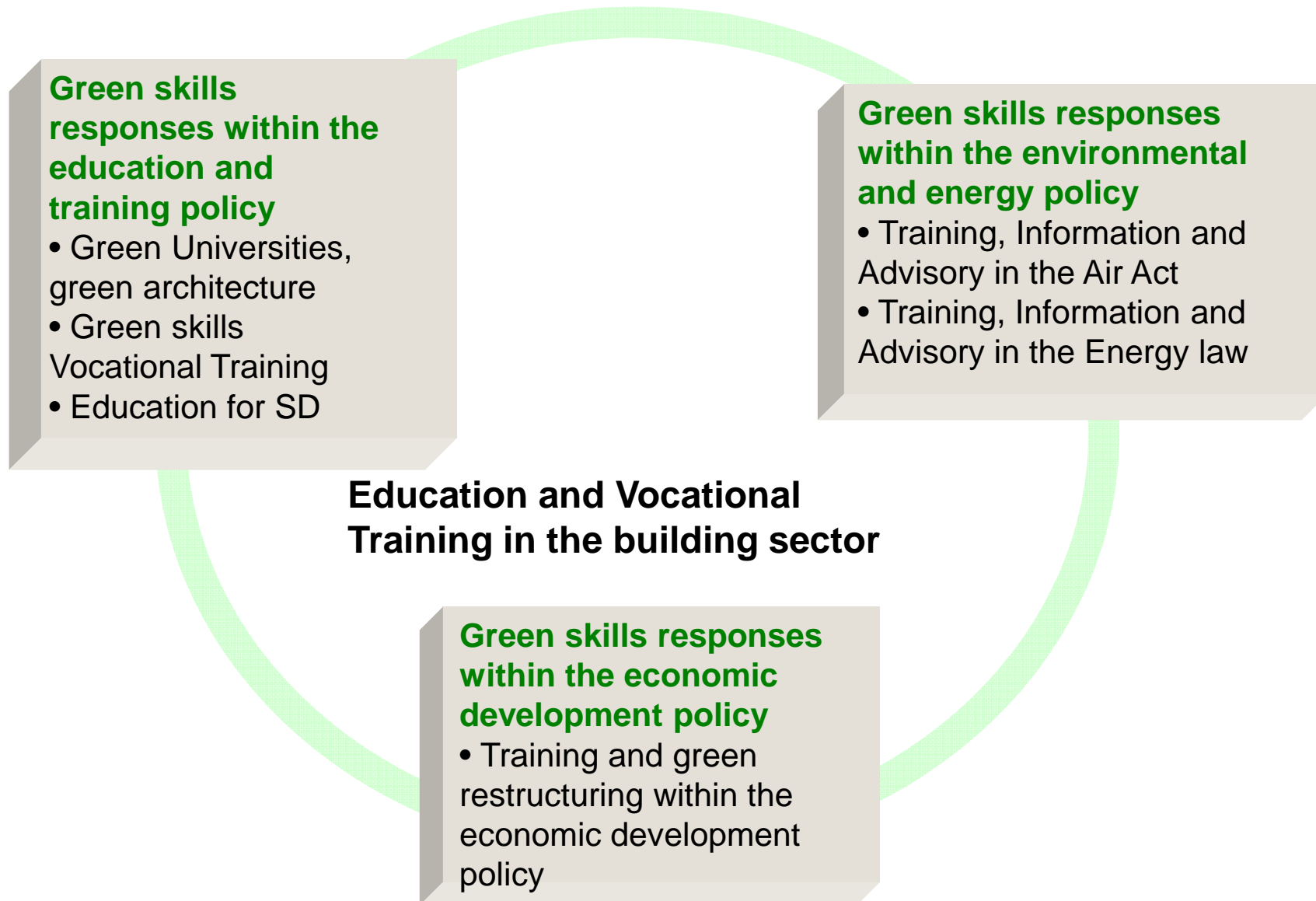
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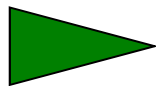
Green skills response strategies



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Outlook: Monitoring

Skills for Green Jobs - 21 background country studies

- [Skills for green jobs in Australia - \[pdf 622 KB\]](#)
- [Skills for green jobs in Bangladesh - \[pdf 740 KB\]](#)
- [Skills for green jobs in Brazil - \[pdf 611 KB\]](#)
- [Skills for green jobs in China - \[pdf 496 KB\]](#)
- [Skills for green jobs in Costa Rica - \[pdf 1554 KB\]](#)
- [Skills for green jobs in Denmark - \[pdf 840 KB\]](#)
- [Skills for green jobs in Egypt - \[pdf 958 KB\]](#)
- [Skills for green jobs in Estonia - \[pdf 898 KB\]](#)
- [Skills for green jobs in France - \[pdf 1016 KB\]](#)
- [Skills for green jobs in Germany - \[pdf 452 KB\]](#)
- [Skills for green jobs in India - \[pdf 8892 KB\]](#)
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