



Energy efficiency for sustainable housing in the ECE region: the work of UNECE Housing and Land Management Unit

Strengthening National Capacities for Sustainable Housing

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Housing: overview of the sector

Western Europe, Canada & U.S.

3/4 of the building stock is residential;
(apartment blocks 36%; single-family
houses 64%)

The annual growth rate in residential
buildings is 1%

More than 40% of residential buildings
constructed before the 1960s

1970s – beginning of energy building
regulations in the Western countries

1972 – first energy efficient building was
designed in the U.S.

1976 – Germany was the first country in
Europe to adopt a law on energy savings

Central Europe and Baltic states

50% of the existing housing
stock constructed between 1960
and 1990

Predominance of private
homeownership: mass
privatization in the 1990s
resulted in owner-occupation
rates from 80 to over 90%

Main issue: the management and
rehabilitation of high-rise multi-
family housing

Eastern Europe, Caucasus and Central Asia

Multi-family panel-built deteriorated
housing blocks with low levels of
energy efficiency

Very low awareness of potential
energy savings

Very little information available on
existing energy efficiency initiatives

Energy-efficient housing stock not a
top state priority

Energy-efficiency policies within the
framework of international
cooperation programmes





Statistics on performance of buildings



40% of global total energy consumption

60% of global electricity use

40% of global GHG emissions

12% of global fresh water use

30% of global resource consumption

10% of global GDP

111 million people employed





Main barriers to energy efficiency in the housing sector





Main advantages to energy efficiency in the housing sector



Environmental benefits : help to mitigate global climate change



Energy availability and security: frees up more energy for alternative uses and to meet growing demands



Social effects: improve health and comfort and make energy more affordable



Regeneration of the built environment: improves indoor comfort and lengthen property repair cycles



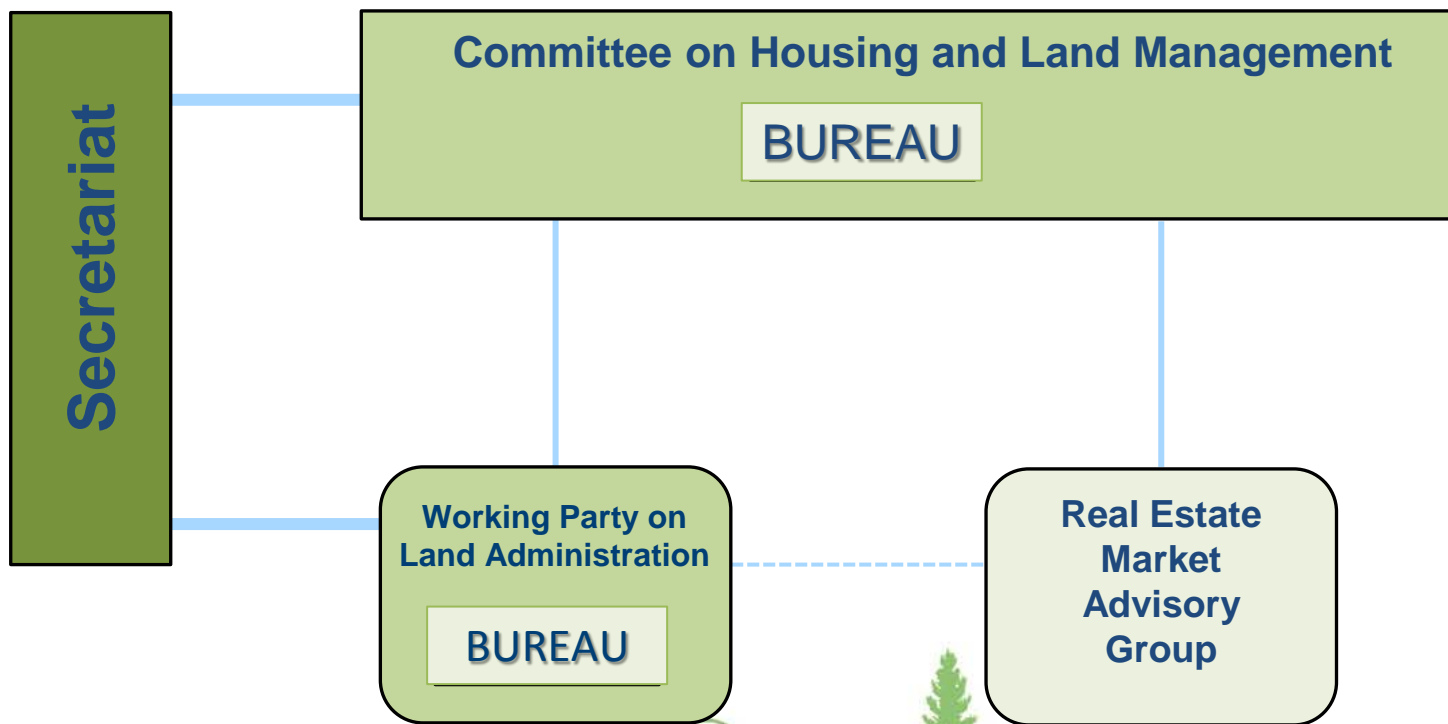
Financial benefits: savings for tenants and less loss in energy delivery for service providers .





UNECE Committee on Housing and Land Management

Structure of the Committee

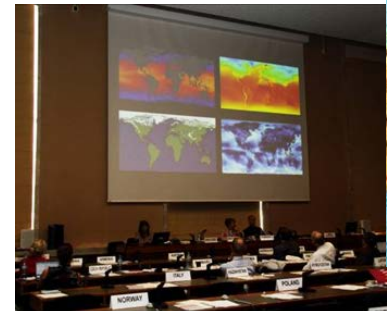




UNECE Committee on Housing and Land Management (CHLM)

Role of the Committee

- Acting as a **platform** for inter-governmental dialogue
- Serving as a **forum** for the exchange of information, experience and best practices
- Assisting with **policy formulation and implementation:**
 - in-depth assessments
 - policy guidance and recommendations
 - advisory services and capacity-building activities





Major region-specific issues addressed

Challenges

- lack of access and affordability to housing
- energy-efficiency of buildings
- insecure property rights
- risks to residential buildings from natural and human-generated disasters

How we address them

- promoting sustainable development
- developing green economies, which support the reduction of carbon emissions and pollution
- promoting social inclusion
- encouraging job creation, and public and private investments in housing





Overview of HLM Strategy 2012-2020



Sustainable Housing and Real Estate Markets



Sustainable Urban Development



Land Administration and Management



Country Profiles on Housing and Land Management

Social housing:

- Workshops
- Policy brief
- PPPs in social housing

Energy efficient housing:

- Regional Action Plan
- Casebook of best practices
- Capacity building
- Building codes and standards

Smart cities

- Regional network of cities Europe and Middle East
- City profiles
- Best practices
- Regional conferences

Urban planning

- Policy guidance document
- Studies on disaster risks, maps

Capacity building workshops

- Copenhagen
- Baku
- Vienna

Studies

- Benchmarking of land administration systems
- Informal settlements
- Unification of land registries

Cooperation FAO, JRC, WB

CP studies

- Uzbekistan
- Armenia
- Croatia
- Kazakhstan
- Russian Federation

Monitoring of policy implementation

- Republic of Moldova
- Serbia
- Tajikistan
- Ukraine

Geneva UN Charter on Sustainable Housing – adopted 8 October 2014

UNECE Strategy on Sustainable Housing and Land Land Management 2014 – 2020 (implementation)



HLM steps towards energy efficiency in buildings

2009



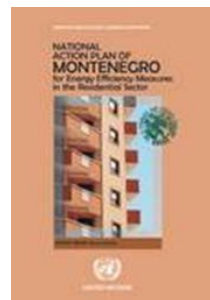
Green Homes

2010

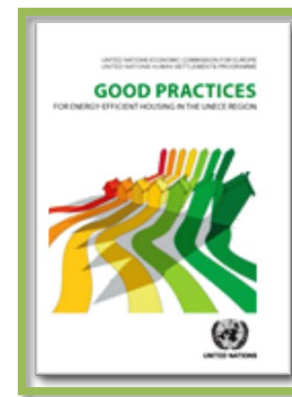


UNECE Action Plan

2011



National Action Plan



- Regional workshops (Minsk, 2011) Tbilisi (2013)
- National workshops

- Informal network of partners and experts





Recommendations on energy efficiency

Legislative framework

Building management

Financial mechanisms



- Political will and commitment
- Public awareness about energy consumption
- Residents control over their energy bills
- Renovation targets
- Alternative to building renovation
- Costs of energy efficiency
- Bankable investments
- Managing buildings
- Support measures at the transition period





HLM integrated approach



- Design a legislative framework
- Create management structures in multi-family housing blocks
- Raise awareness on energy efficiency benefits and prospects
- Conduct building assessments
- Develop and provide access to financial instruments





UNECE work on energy efficient housing – Capacity-building

1. Workshops on energy efficient and affordable housing in:

- Albania (July 2014)
- Tunisia (5th International Forum on Energy)

2. Annual workshops and national action plans, 2014-2016

- Armenia,
- Republic of Moldova,
- Serbia
- Tajikistan

as a part of the UNECE - UN-Habitat UNDA project

3. Exhibition “Greener and smarter homes: energy efficiency in buildings”,

Geneva, 15 September – 10 October 2014





UNECE work on energy efficient housing – Standards for energy efficiency in buildings

1. Proposal for developing a study on standards for EE in buildings (ECE/HBP/2014/4) - accepted in October 2014

2. Establishment of a UNECE Task Force on building codes and standards on energy efficiency in buildings, building materials and energy performance requirements

3. Identification of other possible standards for sustainable buildings (ex. resilience to natural disasters and other construction codes to support healthy and barrier-free housing)





Thank you

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<http://www.unece.org/hlm/welcome.html>

