



# VITAL SPACES

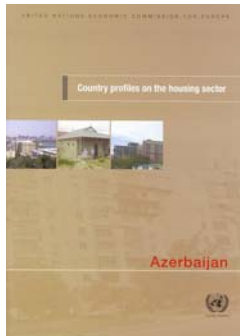
THE NEWSLETTER OF THE UNECE COMMITTEE ON HOUSING AND LAND MANAGEMENT AND THE WORKING PARTY ON LAND ADMINISTRATION

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## UNECE RECOMMENDS INTENSIFYING THE IMPLEMENTATION OF SUSTAINABLE HOUSING POLICIES AND PROGRAMMES IN AZERBAIJAN



UNECE has released the Country Profile on the Housing Sector of Azerbaijan.

In opening remarks on 18 November 2010 at the launch event held in Baku, Mr. Marco Keiner, Director of the UNECE Environment, Housing and Land Management Division, addressed some of the trends in the housing sector of Azerbaijan and highlighted specific challenges facing this country. "Local and regional governments should be given

greater independence for designing and implementing local housing policies, based on their local needs", he said. He further emphasized that housing maintenance and management must be given high priority to keep the housing stock in a safe and decent condition: "Azerbaijan is also facing great challenges when it comes to informal settlements. We support the Government's concern for these issues". He highlighted that the Country Profile recommends the development of effective legislation and mechanisms for targeting existing illegal housing and preventing further illegal construction.

Also speaking at the event, Mr. Dovlatkhanov, Deputy Head of the State Committee of Architecture and Town Planning of the Republic of Azerbaijan, affirmed that Azerbaijan would use the Country Profile "as a toolkit to address existing institutional and legislative gaps and implement sound housing policies in our country".

Government representatives then detailed the implementation of the new Housing Code of Azerbaijan, enacted in October 2009, which covers several of the recommendations contained in the Country Profile study. Particular emphasis was made on the need to establish a single Governmental agency responsible for the development and implementation of national housing policies and programmes.

The Government of Azerbaijan has also implemented programmes focused on improving energy efficiency in buildings and increasing the rational use of energy in the construction sector. In that connection, it was noted that the Government could use the recently adopted Action Plan for Energy-efficient Housing in the UNECE Region to facilitate the implementation of measures aimed at removing barriers to energy efficiency in the housing sector.

The key objective of the Country Profile launch event was to promote the report among policymakers and relevant stakeholders and to define future steps towards the implementation of its recommendations. The meeting was chaired by Mr. Azer Khanlarov from the State Agency for Control over Safety in Construction under the Ministry of Emergency Situations of the Republic of Azerbaijan, and involved participants from all the relevant sectors dealing with housing and construction.

For more about the UNECE country profiles, please visit: <http://www.unece.org/hlm/prgm/cph/welcome.html>

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## UNECE CONTRIBUTES TO IMPROVED LEGAL AID ON THE RIGHT TO HOUSING IN GEORGIA



UNECE and UNDP organized a joint training in Tbilisi, Georgia (22-23 November 2010) to address the question of access to justice in urban development. This training targeted public and private lawyers in Georgia and representatives of this country's Ministry of Economic and Sustainable

Development. The event counted on interventions by international and national policy and legal experts. It followed-up on the findings of UNECE's country profile on the housing sector of Georgia (2007), which recommended the implementation of capacity building activities oriented to the training of government officials.



It is known that Georgia has faced difficulties connected to the housing sector in the post-Soviet period. The privatization of homes affected over 90% of the housing stock, bringing about a series of challenges which are shared with other post-socialist countries. These include the poor maintenance of already deteriorated multi-storey buildings, the proliferation of informal settlements and the lack of access to security of tenure for vulnerable populations. These problems were further exacerbated by natural disasters and military conflicts in recent years. As a consequence, the living conditions of socially disadvantaged groups, internally displaced persons, ethnic minorities and women were harmed.

Participants in the training event learned from experts' advice on good practice policy on the housing sector and on several aspects of existing legislation in Georgia through the substantive analysis of judicial decisions by this country's court system. Topics discussed included aspects of housing privatization law, mortgages law, neighbourhood law and international experiences on the legal empowerment of the poor.

It is expected that the training of legal aid officers for the provision of information, legal advice and litigation in the interests of vulnerable groups will contribute to improvements in their access to justice, thus a more inclusive social and economic development in Georgia.

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## UNECE CALLS FOR ENHANCED DISASTER PREPAREDNESS IN THE HOUSING SECTOR

"It is crucial to develop effective standards and regulations and to ensure a proper institutional framework for disaster preparedness and prevention in Azerbaijan and other countries located in disaster-prone areas", said Mr. Elkhan Asadov, Deputy Head of the Construction Control Agency of Azerbaijan, in his opening address at the UNECE International Forum on Natural Disasters and Building and Construction Safety, which was held on 16 and 17 November in Baku, Azerbaijan.

Recognizing the link between strengthening disaster preparedness and improving security in building construction, the UNECE Committee on Housing and Land Management, in cooperation with the Ministry of Emergency Situations Azerbaijan, organized the International Forum, which considered a number of case studies on disaster preparedness and reconstruction and discussed effective policy solutions for the UNECE region.

"Natural disasters like earthquakes, hurricanes or flooding, cause severe material devastation and human casualties. In order to avoid such human and economic losses, there is an urgent need to develop effective tools and sound policy instruments to ensure disaster prevention systems that include safety in constructions and buildings", noted Mr. Marco Keiner, director of the UNECE Environment, Housing and Land Management Division, addressing the Forum.

While safe building stock should be ensured everywhere, and especially in areas prone to disasters, in many countries, particularly those with economies in transition, there is still a big gap between existing seismic and other regulations and their practical application and enforcement. In addition, many single-family houses in rural areas are not built in accordance with building regulations because many households cannot afford the mandated building materials. It is these houses that suffer most when natural disasters strike. Therefore, the enforcement of adequate national building codes is crucial to make buildings disaster resistant and to enhance sustainability in the region.



Participants in the Forum discussed various policy mechanisms aimed at improving disaster preparedness in the region, and showcased a number of best practice examples of spatial planning strategies in disaster-prone areas; improving coordination of disaster risk reduction and its integration in strategies and action plans at the national level; and promoting the use of construction

techniques for seismic-resistant houses based on traditional local building materials.

As an outcome of the Forum nine recommended actions were agreed to improve disaster preparedness in the housing sector:

1. Ensure effective coordination of disaster risk reduction at the national level;
2. Strengthen national institutional capacity to deal with disaster preparedness;
3. Involve local authorities and expertise in the development and implementation of disaster-reduction action plans;
4. Improve land use planning in disaster prone areas;
5. Conduct disaster risk assessments and provide clear maps of areas/buildings at risk;
6. Strengthen legal frameworks by introducing new building codes and practices, monitor building code application in new construction and enforce building code application through imposition of legal penalties or stopping of construction in cases of non-compliance;
7. Give more priority to the retrofitting of existing buildings;
8. Raise public awareness on building safety and disaster risk reduction by the use of appropriate communication methods (media); and
9. Ensure the involvement of all stakeholders.

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## MULTIMEDIA SIMULATION ON LAND USE PLANNING AROUND HAZARDOUS INDUSTRIAL SITES



UNECE organized a seminar on Land-Use Planning around Hazardous Industrial Sites on 11-12 November 2010 in The Hague under the auspices of the

Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents and The Committee on Housing and Land Management. The seminar, which was hosted by the government of the Netherlands, brought together for the first time spatial planners, safety authorities, real-estate developers, environmentalists and industry representatives to discuss the cross-cutting issues surrounding spatial planning and industrial safety.

The seminar's highlight was an interactive, real-world multimedia simulation that allowed for a free-wheeling exchange of information. The simulation allowed participants to understand the different, and at times competing, points of view regarding planning and industrial safety.

The simulation presented the fictional town of Unch with plans to develop residential areas including the required services for shopping, leisure, health and education. Performance indicators were set up in order to compare alternative plans for development that had an impact on economic activity, quality of life, safety concerns and the environment.

Key players of the game (spatial planner, environmentalist, safety officer and industry representative) had to support or oppose any development according to the performance indicators in their responsibility.

The simulation, which was enthusiastically embraced by participants playing the different roles, highlighted thus that transparency, cooperation and coordination amongst concerned stakeholders in safety issues and land use planning are pre-requisites that cannot be left aside at the time of policy making.

Participants identified the need to further promote the cooperation and coordination on issues surrounding safety and spatial planning and made a number of recommendations for ways to improve the situation.

For further information, please contact the secretariat at: [teia@unece.org](mailto:teia@unece.org).

## CONSTRUCTION OF EARTHQUAKE RESISTANT HOUSES USING TRADITIONAL LOCAL BUILDING MATERIALS IN KYRGYZSTAN // Строительство сейсмостойких жилых домов с применением традиционных местных строительных материалов в Кыргызстане<sup>1</sup>, by Dr. Zhanybek Mamatov and Dr. Akylbek Chymyrov



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Dr. AKYLBEK CHYMYROV IS THE HEAD OF GEODESY AND GEOINFORMATICS DEPARTMENT OF THE KYRGYZ STATE UNIVERSITY OF CONSTRUCTION, TRANSPORT AND ARCHITECTURE (KSUCTA) AND CHAIRMAN OF THE NGO "GEORISK".

The whole territory of Kyrgyzstan is in a zone of active tectonic faults. This predisposes the country's exposure to seismic hazards. Over the past five years there have been several devastating earthquakes in the Naryn, Batken and Osh oblasts of magnitude of more than 6.0 on the Richter scale, which led to a number of casualties and property damage. The main causes of these tragedies are the violations of anti-seismic measures in the construction of low-rise private houses, the poor quality of construction materials and the noncompliance with the established construction

<sup>1</sup> В данной статье дается краткое описание актуальности темы и основного направления исследовательских работ в этой области. Более полная информация о результатах исследований могут быть получены от авторов работы: к.ф.-м.н., доцент Маматов Ж.А. ([janybek@mail.ru](mailto:janybek@mail.ru)) и к.т.н., доцент Чымыров А.У. ([akylbek2005@yahoo.com](mailto:akylbek2005@yahoo.com)) из Кыргызского государственного университета строительства, транспорта и архитектуры (КГУСТА) им. Н. Исанова, г. Бишкек, Кыргызстан.

techniques. Over 90 percent of the homes in rural areas are built using local building materials - clay, adobe, clinker, canes, stone, poplar wood and other inexpensive materials. The poor socio-economic situation of the population does not allow people to build homes using brick, reinforced concrete and hardwood. As a result, homes are destroyed even by small earthquakes and a large number of people are killed in their ruins. An example of this is the Nurinskoe Earthquake in the Osh region with a magnitude of 6.6 on the Richter scale, which occurred on 6th of October 2008 and killed 75 people. Almost all the buildings in the village of Nurinsk were destroyed and only the buildings constructed in compliance with the anti-seismic measures were left intact. At the same time, the traditional technologies of building earthquake-resistant houses, used since ancient times in Central Asia, are still utilized and can be widely implemented in the current conditions. A wide range of traditional and new techniques for construction of earthquake-resistant buildings using local materials have been studied and recommended for implementation.

The reduction of state capital investments in multifamily housing has led to a considerable development of individual housing construction. The proportion of houses being built on the residents' own expenses or by using borrowed funds sharply increased. Therefore, it is expected that in the coming years the main direction of urban development will be predominantly low-rise housing.

In this aspect, products and designs for low-rise building using local materials, supporting a reduction in material usage and enhancing the energy and complexity of the constructions should be developed to improve the earthquake resistance of buildings.

At present, traditional plans of individual housing construction have been established in Kyrgyzstan. The current technical norms of the Kyrgyz Republic allow for the construction of buildings with walls made of clay, following the guidelines of the anti-seismic measures in seismic areas. Adobe is the most widely-used local material in construction in both rural and urban areas. The use of clay in the construction of buildings is widespread because this material has a number of advantages over the other local materials. In this regard, a process was undertaken to develop earthquake-resistant design-planning solutions for homes using local building materials. Together with other Kyrgyz research and design institutions, the department of Design, Construction of Buildings and Earthquake Engineering of the N. Isanov Kyrgyz State University of Construction, Transportation and Architecture (KSUCTA) studies and develops new technologies involving earthquake engineering. Results of the research and experimental work, including the use of full-scale models of adobe buildings and a seismic platform, allow us to confidently recommend new solutions and technologies for building affordable and safe housing.

According to the structural features, adobe buildings of the region can be divided into those constructed: a) without reinforced walls, raised with or without the use of formwork methods; b) with reinforced walls in various ways, including with vertical wooden elements, erected with or without the use of formwork methods; c) with reinforced walls with a wooden or other type of a frame, consisting of vertical, horizontal and oblique elements (pillars, beams and braces with a filling of clay-straw mass) and some form of a rigid frame. Earthen buildings with reinforced walls, depending on the method of enforcement, have different strengths and with such walls can be erected a building that can withstand the natural disaster of serious magnitudes. It is important to note that buildings without any reinforcements, regardless of the method of construction, are not earthquake-resistant and their construction in areas with high seismic activity should be prohibited.

// Вся территория Кыргызстана находится в зоне активных тектонических разломов, что обуславливает и ее подверженность к сейсмической опасности. За последние пять лет произошло несколько разрушительных землетрясений в Нарынской, Баткенской, и Ошской областях республики силой более 6 баллов, что привело к большим числам жертв и материальному ущербу.

Основными причинами трагедий являются несоблюдение антисейсмических мероприятий при строительстве малоэтажных частных домов, низкое качество строительных материалов и несоблюдение технологий строительства. Более 90 процентов жилых домов в сельской местности строятся с использованием местных строительных материалов - глины, самана, шлака, камыша, природных камней, древесины тополей и других недорогих материалов. Тяжелое социально-экономическое положение населения не позволяет им строить с использованием кирпича, железобетона и древесины лиственных пород. В результате жилые дома разрушаются при небольших землетрясениях и большое количество людей погибают под их руинами. В качестве примера можно привести Нурынское землетрясение в Ошской области с магнитудой 6,6 по шкале Рихтера, которое случилось в 6 октября 2008 г. и привело к гибели 75 человек. Почти все здания в селе были разрушены, целыми остались только здания, построенные с соблюдением антисейсмических мероприятий.

В то же время имеются традиционные технологии строительства сейсмостойких домов, которые издревле применялись в регионе Центральной Азии и которые могут быть широко внедрены в современных условиях. Были изучены и рекомендованы к широкому внедрению целый ряд традиционных и новых технологий сейсмостойкого строительства с использованием местных материалов.

Снижение государственных капитальных вложений в массовое жилищное строительство привело к значительному развитию индивидуального жилищного домостроения. Резко возросла доля жилья, возводимого за счет собственных, либо заемных средств граждан, поэтому в ближайшие годы основным направлением в градостроительстве будет преимущественно малоэтажное жилищное строительство.

В связи с этим в следует предусматривать разработку изделий и конструкций для малоэтажного строительства с использованием местных материалов, уменьшение материал-, энерго- и трудоемкости строительного производства, повышение сейсмостойкости зданий и сооружений.

В настоящее время в Кыргызстане сложились традиционные виды индивидуального жилищного строительства. Действующие технические нормы Кыргызской Республики - СНиП КР 20-02:2004 и СНиП КР 20-02:2009 допускают строительства в сейсмических районах зданий со стенами из глинистых материалов с применением антисейсмических мероприятий. Из местных материалов наиболее широкое распространение получил саман. Такое широкое применение глины в строительстве зданий продиктовано тем, что этот материал имеет ряд серьезных достоинств и широко применяется в строительстве как в сельской, так и в городской местности.

В связи с этим Кыргызстане ведутся активные работы по разработке сейсмостойких конструктивно-планировочных решений жилых домов с использованием местных строительных материалов. Совместно с другими научно-исследовательскими и проектными учреждениями страны изучением и разработкой новых технологий сейсмостойкого строительства занимается кафедра «Проектирование, возведение зданий и сейсмостойкое

строительство» Кыргызского государственного университета строительства, транспорта и архитектуры (КГУСТА) им. Н.Исанова. Полученные результаты исследований и экспериментальных работ, в том числе с применением натуральных моделей саманных зданий и сейсмической платформы, позволяют с уверенностью рекомендовать новые решения и технологии для строительства доступного и безопасного жилья.

Саманные здания, возводимые в регионе, по конструктивным особенностям делятся на построенные: а) без усиления стен, возводимые опалубочным или безопалубочным способами; б) с усилением стен различными способами, в том числе и с вертикальными деревянными элементами, возводимые опалубочным и безопалубочным способами; в) с усилением стен деревянным или другим каркасом, состоящим из вертикальных, горизонтальных и наклонных элементов (стоек, балок и раскосов с заполнением из глиносоломенной массы) и образующим жесткую раму.

Глиняные здания с усиленными стенами, в зависимости от способа усиления, имеют различные прочности и с такими стенами могут быть возведены здания, способные устоять против природных явлений различной силы.

Здания без усиления, независимо от способа возведения, являются не сейсмостойкими и их строительство в районах с высокой сейсмичностью должно быть запрещено.



Жилой дом из самана с железобетонными включениями (Чымыров А.У.)

## CITIES IN DANGER – THE LACK OF EDUCATIONAL PROGRAMS IN URBAN PLANNING AS IT PERTAINS TO DISASTER RISK MANAGEMENT, by Jaime Brehme

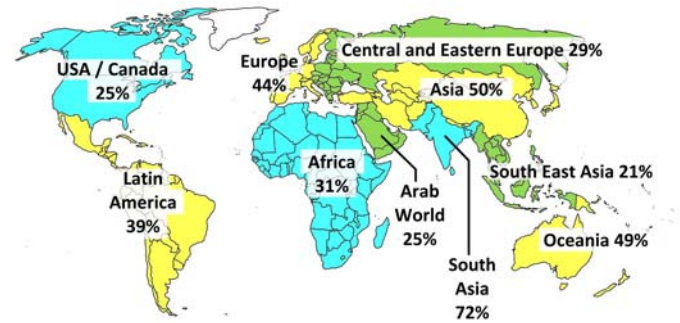


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The objective of this research was to explore if and to what extent Disaster Risk Management (DRM) was offered in university programs related to urban planning. The hypothesis was that the inclusion of DRM is low. To validate this hypothesis 226 universities were surveyed worldwide, receiving feedback from 137. Considerable differences were found among the world regions; however, on average 59% of the programs do not include DRM topics, while 41% do include them. This confirmed the hypothesis and concluded that generally university education is currently lacking in training skilled professionals to prevent or mitigate disasters.

It is important that the percentages found must not be considered alone but instead combined with three findings: first, the location of

the programs within the university levels (under- and post-graduate studies); second, the tendency of focusing on teaching physical solutions; and third, the deficit found in regions with higher numbers of hazards.



Graph: inclusion of DRM in the university programs by region.

Regarding the first finding, within the programs that consider DRM in their curriculum, 48% of them were found in Master or Ph.D. studies, 16% in research institutions (or individuals) and 36% in bachelor studies. By reviewing these percentages it is possible to say that the majority of urban planners are not trained in DRM due to the concentration of this knowledge in postgraduate levels. This, together with the fact that most of the students might not have the economic resources to attend postgraduate studies (especially in poor and developing countries), converts this expertise into a privilege affordable by only a few.

The second finding revealed that the programs are mostly concentrated on physical solutions (structural approach) rather than long-term planning solutions (non-structural approach). The biggest number of them is oriented toward the design of constructions to withstand destructive forces, while a smaller number is focused on mitigating those forces through the use of planning tools. The research proposes that both approaches should be balanced when designing the university programs, providing a more holistic vision.

The third finding is quite critical: the inclusion of DRM within the university programs of regions with higher numbers of hazards is very low, as is the awareness. The low levels of awareness could be observed in the feedback provided by some respondents from countries affected by the Indian Ocean tsunami in 2004. They indicated the incorporation of DRM topics in the programs as a consequence of that disaster, exposing a tendency to have a reactionary attitude instead of a preventive one.

The third finding is especially relevant when considering different types of vulnerabilities. Of greatest importance is social vulnerability considering its strong correlation to poverty. Consequently, the universities located in countries with high levels of poverty should prioritize the inclusion of DRM in their programs, helping to generate the positive cycle showed on the right.



The research concludes that it is necessary to include DRM topics in a larger number of university programs. But this is not enough; it is imperative to deliver the knowledge at the undergraduate level, where the largest number of professionals is educated. This is especially relevant for regions affected by higher numbers of hazards, where there is an alarming lack of DRM training. Regarding quality, it is important to design programs that provide a wide scope of tools to manage the risk of disasters, especially planning tools. This is simply because physical solutions might not be as

economically viable in certain countries. All these measures could contribute to the positive cycle of disasters reduction and the construction of safer cities, where the universities have a decisive role.

## STRATEGY FOR REDUCTION OF SEISMIC RISK FOR HYDRO-TECHNICAL STRUCTURES, by T.R.

Rashidov



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Research conducted on the city of Tashkent to assess seismic risks and develop means to reduce the consequences of earthquakes formulated an innovative methodology and new concepts for seismic risk management that provide:

- a reliable source of seismological and engineering-geological information;
- an estimation of the seismic effect of the various types of earthquakes;
- an estimation of the vulnerability of buildings and building-support systems;
- a means of developing potential scenarios and programs of action for each of the analyzed type of earthquakes, including estimating cost of eliminating the consequences of such disasters;
- opportunity to analyze existing measures to reduce seismic risk and develop new ones.

The research process involved collecting detailed information about the geological and tectonic conditions of the region, seismic activity, soil characteristics and seismic microzoning. Sites within the territory of the city that are similar in terms of characteristics such as surface shape, lithological composition, thickness of ground layers, and level of undersurface waters were chosen in creating the geological profile of the city.

Collected information was used for the mapping of the seismic danger levels in the researched territory of the region using the methodology and software offered by experts of the USGS (USA). The maps that were developed showed spectral peaks accelerations as well as the distribution of the territories with 10% and 2% seismic danger probability levels.

Inventory of buildings and structures located on the territory of the city was carried out for the purpose of analyzing sustainability criteria such as materials used and time of construction, number of floor levels, approaches in designing in accordance with the established seismic norms (at the time of construction) and category of damage based on the type of seismic effect. Based on the inventory results, 11 types of residential buildings were classified.

To process and present all inventory materials in a graphic format, we used the software program ArcView GIS, also provided by USGS. A map of satellite images of the city was created for the purpose of putting together the obtained information into concrete geographical coordinates and creating a GIS-database.

For each type of building the average value of the damage index is defined, that is the total sum of damage degrees when the intensity of the oscillations of the ground corresponds to a designed level of

building seismic resistance. The degree of damage is defined by the generally accepted seismic intensity scale MSK-98.

A series of maps showing seismic damage distribution in percentage points for all types of residential buildings and estimations of the number of people that could be affected by a potential earthquake were developed. We concluded that at least 25% of population of the city could require a temporary refuge and new dwellings after a potential earthquake with the estimated magnitude of 4 or 5 degrees on the MSK scale.

The results of our research provided the basis for the development of a strategy for seismic risk reduction aimed at:

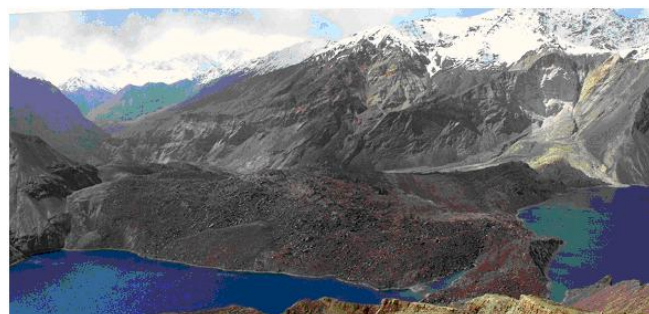
- raising public awareness, disseminating information on seismic dangers to decision-makers, training qualified specialists capable of developing reasonable plans of action in emergency situations based on existing local conditions;
- researching seismic resistance of existing buildings, introducing the use of modern ways of seismic protection in the design and construction of buildings;
- inspecting buildings and structures and deciding whether they should be strengthened or dismantled;
- developing a legislative framework that would monitor compliance of constructions with the standard norms for seismic resistant construction, as well improving these standards;
- increasing the stability of support systems such as medical establishments, fire protection system, transportation, communication and support from the administration in the event of an earthquake;
- developing action plans for relevant organizations in case of an earthquake.

Within the framework of the conducted research, we prepared a 'Manual on inspection and strengthening of residential buildings' and a 'Manual on diagnosing, testing, and strengthening reinforced constructions of buildings'. Of particular interest are the materials related to seismic-resistant constructions and provision of functional support systems both during and after earthquakes.

Along with residential buildings and support systems, various types of hydro-technical structures (HTS), especially dams, are of special interest to us. The safe and uninterrupted operation of a large number of industrial facilities, power plants, etc., as well as the general safety of the territories located in proximity to the HTS, depends on the maintenance of these structures. For territories having an additional risk factor, such as a high level of seismic activity, the problem of preventing the tragic consequences of a strong earthquake on HTS, particularly dams, is especially important and requires special approach.

Out of the various natural disasters, earthquakes present the greatest danger to dams and reservoirs. Statistics prove that dam damages as a result of earthquakes occur quite often and we have a record of over hundred such cases in the region.

It is clear that taking into consideration the seismic resistance of HTS, as well as their operational safety is of utmost importance. Thus, their conditions need to be periodically checked and if any irregularities are noticed, they should be immediately repaired.



The basic elements of the concepts of seismic risk reduction, which use modern GIS-technologies for processing data and creating visual presentation of the research results, are the:

1. availability of seismological information;
2. availability of necessary geological information;
3. estimation of the seismic effect for the designed earthquake types
4. assessment of the vulnerability of the HTS (including their auxiliary buildings and structures);
5. earthquake damage assessment and development of action plans in emergency situations;
6. development of measures for seismic risk reduction.

The implementation of the outlined concepts, the periodic checks of the technical state of HTS (including their foundations and auxiliary structures), their classification, generalization and adequate analysis of the damages in relation to the type of construction/design and size of the HTS, and timely addressing of problems on defects of these structures will ensure the prevention of possible destruction of dams and the grave consequences to nearby territories in emergency situations. The measures outlined should be carried out whether or not damage occurred on HTS after a strong earthquake.

## UNECE DISCUSSES ACTION PLAN ON ENERGY EFFICIENCY IN HOUSING WITH STAKEHOLDERS OF THE REAL ESTATE SECTOR



An International Forum on “Greening real estate markets: a multi-stakeholder perspective” was held in Dessau, Germany on 29 and 30 November 2010. The event was jointly organized by the UNECE Real Estate Market Advisory Group and the German Federal Environment Agency (UBA).

Considered a nodal point for many services and industries, the real estate sector has a key role to play to steer adaptation to climate change by UNECE countries. A more intensive use of green technologies by developers could radically transform the city landscapes of the region. Furthermore, it has been estimated that green investments will have a substantial multiplier effect on a country's gross domestic product, in addition to savings in building operation costs for families.

The International Forum was held after the UNECE Committee on Housing and Land Management approved an Action Plan on Energy Efficiency at its 71st session in September 2010.

Speakers and participants discussed the UNECE Action Plan, reviewed existing obstacles and ascertained economic and social benefits associated with a green real estate sector as follows: the impact of a more intensive use of green technologies on the durability of homes and related lower operations and maintenance costs for families, the need to better calibrate subsidies and tax-incentives to facilitate green retrofits of existing housing stock; the importance of the use of ICT technologies by cadastre authorities to better quantify the potential for in-house energy generation with solar panels; the need to update value appraisal practices of buildings to better quantify the effect of green investments, and the impact of a green real estate sector on improved comfort of living spaces and health of populations.

As part of its programme of work, the Real Estate Market Advisory Group (REM) contributes to the work of the UNECE through

capacity-building activities, dissemination of information on good practice and know-how on specific policy areas related to the real estate sector. The outcomes of discussions in Dessau will assist the Committee on Housing and Land Management and its Working Party on Land Administration to better focus their upcoming activities as they relate to the implementation phase of the Action Plan.

For further information please contact:

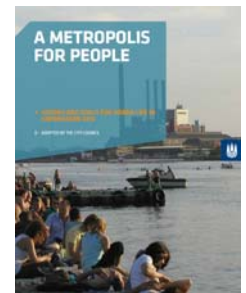
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## COPENHAGEN'S CLIMATE CHALLENGE, by Hans Chr. Karsten



Cities have a special role and responsibility in solving the climate challenges. They have the capacity for action that national states often lack allowing them to make visions come to life almost immediately. The City of Copenhagen has already set clear and ambitious goals towards a green city. We have taken upon ourselves two great challenges. First, Copenhagen is aiming to become the world's first Carbon

Neutral city in 2025 by creating Green Growth in collaboration with investors and innovators and not by limiting the economical growth. Second, Copenhagen has to be a Metropolis for People, a green, sustainable and an attractive city that offers a good life to its inhabitants. To this end, the City Council adopted a plan last year on improving the urban life in Copenhagen: a Metropolis for People.



Seen in the light of the financial crises, some might wonder if investing in green solutions is the way forward. In Copenhagen, we consider green investment as necessary in order to get the economy growing again. The recently adopted budget for the City of Copenhagen includes green investments amounting to more than 35 million €. We would like to make these investments in collaboration with partners from the private sector.



Mr. HANS CHRISTIAN KARSTEN IS THE HEAD OF URBAN ENVIRONMENT OFFICE, CITY OF COPENHAGEN.

In Copenhagen, we focus our efforts in three main areas:

Firstly, we are building more green transport solutions and we call it Green Mobility. We are extending the metro and a new City Ring will be ready in 2019. There is a constant focus on how to increase the number of cyclists in our city and today, more than one third of the Copenhageners ride a bike to work or study. More and better bicycle lanes will further make the number of cyclists grow.



Secondly, Copenhagen becomes, literally, a greener city. In 2011, we will plant 5000 trees and our aim is to have planted 100,000 trees by 2025. In addition, we are making the rooftops of Copenhagen green. The green rooftops will help lower the energy consumption, reduce the temperature in the city and soak up rain, which helps reduce the strain on our sewers. The Northern Harbour in Copenhagen will become a new sustainable district with room for testing green technologies. The new green urban area has a potential for 40,000 inhabitants and 40,000 work places.



And lastly, Copenhagen makes investments in energy efficiency and new technologies. Municipal buildings are made more energy efficient and we are increasing our capacity for sustainable energy by erecting more wind turbines and moving from coal to biomass in the power plants. Private companies are offered the use of the City of Copenhagen as a green laboratory for testing new technologies. 3.5 million € is spent on creating new green energy sources, especially in fuel cell and hydrogen technology.

Copenhagen's ambitious targets for the reduction of CO2 emissions are to be achieved through different initiatives and 34 of them are in progress so far. The most important initiatives are:

- Shift in energy production from fossil fuel to renewable energy sources such as biomass and wind mills
- Greener transport
- Reduction in energy waste in buildings
- New initiatives concerning lifestyle changes
- Low energy urban developments
- A climate change adaptation strategy for Copenhagen

Copenhagen is making progress. The results and the progress are documented and analyzed in an annual report - The Copenhagen Green Account.

Everything seems simple if we are just to read this article but that is not the case. The City of Copenhagen has a very hard job to do but we have done our homework to meet the challenges: ambitious long-term visions, political commitment to take the necessary actions step by step and an accounting system that describes the achievements.

## Internationale Bauausstellung Hamburg PROJECTS FOR THE FUTURE OF THE METROPOLIS, by Simona Weisleder

The City of Hamburg has a vision of "foresighted growth" (Wachsen mit Weitblick) and the Internationale Bauausstellung (IBA) is one instrument of targeted urban development in the 21st century. IBA Hamburg creates, develops and considers exemplary projects and programmes in the spheres of town planning and urban society, aiming to create a sustainable footing for the changes happening in the metropolises of this globalized world.

The IBA Hamburg GmbH is a company fully owned by the Free and Hanseatic City of Hamburg.



This ambitious project focuses on the city districts Wilhelmsburg and Veddel, i.e. the Elbe islands in the heart of Hamburg and on Harburg upriver port. Between them they cover an area of 52 square kilometres and are home to nearly 55,000 people from 40 nations.

For centuries the islands were part of the Elbe River's flood plain. After dykes had been built, they were initially put to agricultural use. It wasn't until the last century that the port industry discovered the Elbe islands as a site for industrial and commercial operations. Working class housing, light industry and allotments sprang up between meadows and shipyards. Nowadays, satellite developments of high-rise flats complete the picture.



IBA Hamburg has bundled this complex set of problems into three key themes – "Kosmopolis", Metrozones" and "Cities and Climate Change".

### Key theme Kosmopolis – Turning diversity into strength

The greatest forces for social innovation may be found where people share living space and encounter their fellow residents. IBA Hamburg regards the diversity of an international urban community as an opportunity: a chance for a candid exchange and the willingness to see other points of view without any pressure to adopt them oneself.

Many building projects and social or cultural schemes are designed with this in mind. For example, the Weltquartier, a 1930s housing estate inhabited by people from over 30 different countries, is being refurbished and improved in consultation with the residents.

### Key theme Metrozones – The interim spaces become liveable

Stacked up containers and port cranes next to residential areas and derelict industrial sites punctuated by road and rail routes, abandoned port basins and marshland: jarring contrasts and broken spaces give the Elbe islands a fractured, yet exciting aspect. IBA calls these places, which are typical of many cities' inner peripheries, "Metrozones".

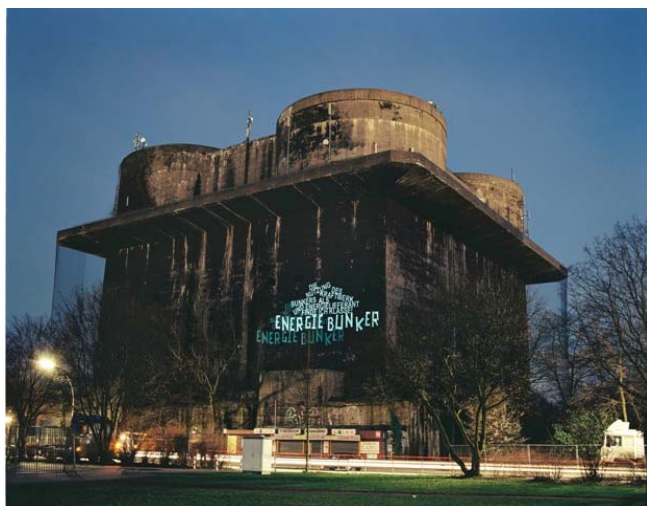


## Key theme Cities and Climate Change – growing in harmony with the environment

Climate change presents particular challenges to the Elbe islands. Since the Great Flood of 1962 everyone here knows how necessary it is to respect the environment when dealing with the forces of Nature. In addition, Wilhelmsburg is burdened with inherited industrial and port pollution, which includes, for example, the former landfill in Georgswerder.

IBA Hamburg's Climate Protection Concept "Renewable Wilhelmsburg" sets new standards for the post-fossil fuel era. The concept is based on four strategic pillars. The proportion of renewable energy used will gradually increase until it reaches 100 percent. Combined heat and power plants (CHP) and regional or local integrated energy systems improve energy efficiency. High efficiency standards for building services in new-builds and refurbishments reduce energy consumption. Public information campaigns and economic incentives encourage the local population to "join in".

A lighthouse climate protection project is the transformation of the former landfill in Georgswerder into a regenerative energy hill generating electricity for nearly 3,000 households.



The plans for Wilhelmsburg's flak bunker, a leftover from the Second World War, are similarly ambitious. This monumental building is to be turned into a renewable energy plant, with a heat storage tank and integrated cogeneration (CHP) plant. The Energiebunker will then supply some 3,000 homes in the neighbouring district with renewable power, hot water and heating.

IBA shows how cities can continue their dynamic development yet at the same time avoid damaging the climate.

## UNECE Discusses Policy Solutions to the Challenge of Informal Settlements



To better understand the role of spatial planning and the responsibilities of land administration authorities to reduce the spread of informal settlements in the UNECE region, the Working Party on Land Administration, in consultation with the

Committee on Housing and Land Management and with cooperation of the General Directorate of Land Registry and Cadastre of Turkey organized a workshop in Antalya, Turkey, on 28 and 29 October 2010.

According to a recent UNECE study (*Self made cities: in search of sustainable solutions for informal settlements in the United Nations Economic Commission for Europe region*), More than 50 million people in the UNECE region live in informal settlements today, without access to legal titles on their properties and to basic facilities such as running water and sanitation. The quality of life for dwellers in informal settlements could be greatly enhanced if more socially responsible housing policy is introduced. Informal communities are the result of long-term trends in urban development that include rapid urbanization, poverty, displacement of refugees due to wars, dysfunctional land management, inadequate spatial planning systems and shortage of affordable housing. Because its causes are multidimensional in nature, holistic policies are necessary to achieve sustainable solutions.

During the workshop, speakers emphasized the advantages of well coordinated spatial planning and land administration policies to integrate strategies currently undertaken by separate public institutions. Streamlining registration and conveyance procedures and reducing their costs will contribute not only to safeguard the interests of owners but also of those who may have legitimate claims on the land they inhabit but currently lack the necessary legal means to engage in productive activities.

In what concerns land administration, government experts discussed the need of improved coordination amongst different levels of authority (national, regional and municipal) to ensure common standards for the use of Geodata information. On this issue, representatives of the General Directorate of Land Registry and Cadastre of Turkey summarized progress made in this country in the build up of a National Spatial Data Infrastructure. Policies to improve the efficiency of the Turkish registration system have been already implemented after a series of studies were initiated in 2004 to assess how to best integrate Geographical information systems at the national level.

Other case studies from Germany, Montenegro, Azerbaijan, Georgia, Croatia, the Former Yugoslav Republic of Macedonia, Lithuania and Spain, amongst other countries, showcased the different advantages of effective land and real property records to make real property transactions more efficient as well as to provide accurate information on land rights and land use for citizens. Finally, the UNECE Secretariat described the increased salience of the challenge of informal settlements as it has become reflected in publications of the two UNECE in-depth studies of housing issues: the country profiles on the housing sector and the land administration reviews. The advice is clear: equal, affordable and secure access to land and housing are fundamental to improving living conditions, and effective regulatory tools should be part of any serious policy reform.

For more information, please contact:

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## WHAT'S NEW:

### AT THE SECRETARIAT: OUR NEW INTERN



**Milen Antov** started his internship with the UNECE Housing and Land Management Unit on October 11, 2010 and will be with us until the end of the year. He is mainly assisting with finalizing the Country Profile on Tajikistan and the preparation for HLM workshops. He has also recently been appointed as the ECE Interns' Coordinator and is currently responsible for the interns' social programming, among other things.

Milen, a Bulgarian-Canadian, studies Political Science at Duke University, NC in the USA and is currently in Geneva on a Boston University - UNIGE Program for a semester. His academic concentration is International Political Economy. He has also studied Politics and International Relations at the University of Oxford and Russian Language at the St. Petersburg State University. Milen is fluent in English, Bulgarian, and Russian.

## ANNOUNCEMENTS:



### INTERNATIONAL FORUM: PROPERTY TRANSACTION IN THE DIGITAL AGE

Well operating property systems are rare in the world. Yet they are at the basis of the real estate sector and could influence the productivity of the economy as a whole.

Property transactions, including different forms of mortgaging, have been deeply affected by technological changes during the recent years. The digitalization of property registration and conveyancing has been the most challenging innovation. While on the one hand this has led to more efficient land and real estate administration through shortening administrative procedures, on the other hand it has opened doors for new opportunities for fraudulent activities, especially in the banking sector.

The international symposium "Property Transaction in the Digital Age", held in Mülheim an der Ruhr/Germany in October 2010 dealt with this important topic and related challenges. The event was organized by the ZENIT network (a public private partnership that provides services for enterprises and the public sector in the state of North Rhine Westphalia, Germany). The event gathered more than 80 experts from 15 countries who discussed the current situation of land administration and real estate finance systems in their countries and how different transparency and efficiency measures could be introduced based on good practice examples worldwide.

The outcomes showed that even within Europe there were multifaceted experiences in what concerns adaptation of land registers, cadastre and banking systems to new IT applications and the challenges ahead. The example of North-Rhine-Westphalia, where cost-effectiveness and public trust in the system created synergies that were appreciated by the general public could be replicated in other contexts, especially in countries where resistance to change by stakeholders has prevented the implementation of innovative reforms.

All results of the symposium will be published in a conference volume and can be downloaded from [www.zenit.de](http://www.zenit.de) or [www.netzwerk.zenit.de](http://www.netzwerk.zenit.de).

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## A HOUSING FORUM FOR EUROPE AND CENTRAL ASIA



by Don Haszczyn  
Area vice-president  
Habitat for Humanity  
Europe and Central Asia

The past few years have highlighted just how central housing is to both our economic and human development in the Europe and Central Asia region. Housing is also central to many aspects of our lives: our education, security, health, employment, our communities, even our identity and spiritual wellbeing. It is at this crucial time that partnering institutions—the **International Federation of Red Cross and Red Crescent Societies**, the **United Nations Economic Commission for Europe**, the **United Nations Development Program** and **Habitat for Humanity**—have announced an exciting joint forum focused on housing in the region to find action-based solutions and ideas.

Whilst the housing sector continues to feel the impact of the recent housing, financial and resulting economic and political crises, some countries and actors are finding new and innovative solutions. The challenges in Europe and Central Asia are both diverse and complex and include the environment, the reduction of poverty and exclusion, an ageing population, a lack of affordable housing for the next generation, ineffective financial regulation and practices, outdated and dilapidated housing stock, vulnerable populations, natural and civil disaster response and prevention, financing, and the fact that housing accounts for more than 30 percent of energy consumption in the region.



There are also numerous and increasing barriers to entry to both the private and social housing markets, especially for the more vulnerable in our societies. There is also need to build and improve homes so that they reach decent standards in tenure, adequate living space, durable construction, and so that they have affordable access to water, sanitation and energy. Such challenges are often only compounded by structural conditions specific to post-communist economic and social transition countries, such as the de-nationalization and privatization of housing, the phasing-out or

abandonment of social housing models, the under-development of housing finance, and the banking sector more generally. But, as the world's attention turns from an economic and financial crisis to an environmental one, the issue of housing, whilst highly politicized, remains fragmented and generally low on the regional developmental agendas.

Globally, urbanization and population growth both continue at an alarming pace with the world population set to grow to 9 billion by 2050. The majority of the world's population is now living in cities. Despite the efforts of many and the Millennium Development Goals, this is changing social patterns and exacerbating demand for decent housing, resulting in increasing poverty, civil unrest and increased burden on the environment. The impacts of climate change, including climate related disasters, mitigation policies, desertification, and the risk of rising sea levels, is also having an important impact on human settlement. Whilst the issues in the region are somewhat different, the impact of these global changes is profound and not limited to increasing demands on immigration both within and into Europe.

The ambition of the **Europe and Central Asia Housing Forum 2011** is that it be an "agenda setting" event, whilst at the same time being a platform for exchange, mutual learning and consensus building between people who are committed to the cause of sustainable and resilient housing for all. In order to achieve these aims, the forum aims to be highly engaging and creative with a significant degree of "participant and self generated" content in the program to generate interaction and debate. We are inviting participants from all parts of the housing sector – civil society, business, non-profits, policy and research.

The work of the Forum is divided into four tracks. These are outlined below and we hope to explore these in more detail over the coming months both pre and post the Forum.

#### A. Housing - a political agenda

This track looks at the political aspects of housing and how housing rights, policies and governance are crucial to a well functioning housing sector.

#### B. Housing Vulnerabilities

This track focuses on addressing the existing and physical and environmental housing challenges in order to build more resilient homes and cities for all:

#### C. Housing beyond the Crises

This track focuses on sharing successful, scalable, and sustainable models for housing finance solutions to the current economic, financial, and environmental crises.

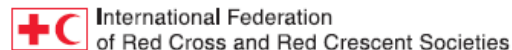
#### D. Housing and Human Development

This track explore the links between housing, human development and reducing poverty.

We believe the time has come for the key decision makers and stakeholders in the housing field to cooperate to build a vision and agenda for a sustainable and resilient future for all, and to bring the issue of decent housing to the forefront of the agenda in the Europe and Central Asia region. I hope you will take the opportunity to visit our forum website at [www.ecahousingforum.eu](http://www.ecahousingforum.eu) where you can both find out more and register for the forum, and we warmly invite you to support us and participate.

## FIRST HOUSING FORUM EUROPE & CENTRAL ASIA: A vision for housing in Europe and Central Asia, 4-6 April 2011, Budapest, Hungary

In partnership with:



For the first time, housing decision makers, professionals, policy makers and other major stakeholders are aiming to "build" a more sustainable and resilient housing future for the Europe and Central Asia region. This first housing forum aims to provide an opportunity for sharing best practices, learning and tackling the key housing issues we face today.

**Attendance is limited to 200 participants!**

#### FORUM HIGHLIGHTS

- Presentations of research papers or case studies.
- Panel discussions and roundtables.
- Showcases of innovative projects and initiatives.
- Workshops.



#### WHO SHOULD ATTEND?

If you are concerned about providing housing solutions, you cannot afford to miss the Europe and Central Asia Housing Forum 2011. The forum will be of interest to both decision-makers and housing-sector professionals in Europe and Central Asia.

#### A NOTE ON THE COORDINATOR:



Inputs to this newsletter are coordinated and edited by Ms. **Cecilia Batac**. You may contact her at [Cecilia.Batac@unece.org](mailto:Cecilia.Batac@unece.org)



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