ces for the future generations is the starting point of all adaptation measures following changes in the hydrological cycle.

Flood Prevention

Amongst the primary measures for ensuring better flood prevention and broader water retention are:
- reservation of existing flood plains;
- reservation of new flood plains, planned because of changed climatic conditions;
- reservation of spaces for water reservoirs;
- sustainable arrangements for water courses prone to flooding and adaptation measures for the new protection standards
- raising of bridges to new heights above water courses.

Timely evacuation of inhabitants and mobile material goods and the execution of temporary protection measures depend on the success of forecasting extreme events such as floods. Successful forecasting of floods is tied to forecasts of high water, which are possible on longer water courses, well equipped with automatic measuring stations and ombrographs and the data led directly to data management centres. In Slovenia there are no such water courses nor equipment. Therefore in our early warning system we should involve the meteorological office and use their data on precipitation forecasts - with improved periodic and geographic resolution, monitor the intensity of precipitation by radar, include a forecast hydrological model for predicting the height of the flood wave, etc.

Water Supply

Because of rise in temperature and possible higher frequency of drought periods we can expect increased use of water by end users, as well as worsening conditions in water provision. The primary adaptation measures are:
- preservation of the quality of subterenean water in water protection areas, which are still not in use;
- draining of water from higher lying water bearing structures, that are not under settlement or development pressure as lower lying water bearing areas in alluvial plains;
- diminishing losses in the water supply network by renewal of existing systems;
- rational use of water in households and industry;
- adaptation of outlets from refuse water treatment plants to changing levels in medium low flows;
- adaptation to communal systems for drainage of atmospheric water by increasing the volume of retention pools according to higher precipitation intensity;
- reservation of spaces for constructing new accumulation basins for enriching low flows.

Execution of international, national and regional adaptation strategies based on possible climatic changes are necessary measures. Water is an integral commodity, necessary for the preservation of ecological and economic systems. Flooding and water supply are only a part of an extremely varied topic. An integral approach to surmounting possible obstacles concerning changes to the water cycle is therefore compulsory also in adaptation fields of medium low flows of water courses and the adaptation of structures and functioning of hydroelectric infrastructure.

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Note

The article is part of a report prepared by the author for the Ministry of environment and physical planning for the 1st National Report on Slovenia to the UN convention on climatic changes

Tables

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Table 2: *Estimated damage caused by elementary disasters and the gross domestic product in Slovenia, 1991-1995*
Table 3: *Degree of provision of the population according to activity in Slovenia*
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Ivan STANIČ

Design for Security, the British Experience

1. Introduction

Secured by design[1] is a promotion campaign in Great Britain, begun in 1989 and organised on initiative by the Chief Police Officers Union and Crime prevention unit at the Home Office. The goal of the campaign is to promote secure building construction, from planning and design to construction of housing estates and individual buildings, i.e. promoting design that can effectively and in a passive sense diminish possibilities for crime. Buildings which would achieve qualities of security promoted by the Police would be granted a certificate and right to use the logotype. Granting of the certificate wold indirectly mean a higher value of the real estate and lower insurance premiums.

Secured by design *against criminal acts* in the design phases a mode of preventive activity, whereby security measures are integrated in a cost efficient way, thus creating benefits for developers and future inhabitants.

Basically efficient planning of housing estates from the point of view of security means using certain security features that can be easily built into a layout. In this context implying defensive space, surveillance, design of open space and acts on particular buildings, whereby the most important idea is to reduce fear from crime. Some of the proposed measures from the elaborately presented ideas are shown in continuation.

2. Planning Housing Estates

The goal of the manual for planning housing estates is to create a secure living environment, that will be a less attractive target for crime. The ideas are based in known theories on defensibility and territoriality, meaning the creation of real or virtual barriers in the real, physical environment, stressing the importance of private property and thus promoting „natural" surveillance. Unwanted intruders would thus loose their anonymity, unhindered passage through an estate and retreat.

Research on housing estates in Great Britain show that in neighbourhoods built in a compact fashion there are much less criminal acts (burglaries, car theft, assaults, muggings, robberies). Wind swept areas with expansive open spaces or housing estates with many entrances and large parking lots or uncontrolled areas that are obstructed by built objects and poorly maintained greenery, are areas with many hiding places, potentially uncontrollable points of entrance or exit (or escape), thus also areas that are easy targets for criminal acts.

The idea is that by well thought out design of new housing estates it is possible to reduce the potential danger of crime, i.e. burglaries, attacks, vandalism. At the same time these acts can diminish fear of crime, it would however be naive to presume, that only selection of layout and details can prevent criminal acts. The point of planning housing estates from the view point of security is to increase the feeling of identity with the neighbourhood by its inhabitants and to promote the feeling of belonging to a neighbourhood. The indirect effect is the recognition of strangers, which mustn't become a xenophobic response, but a self-defensive tool for protecting ones neighbourhood, home or property.[2]

A well planned housing estate allows uninterrupted views to neighbouring buildings and also assures privacy with minimal intervention. Similarly possibilities for passage by motor vehicles has to be unhindered: with traffic calming, passage is possible, but slower; use of „noisy" materials for paving; narrowing of exits; markation of entrance points. On pedestrian paths and other public surfaces, surveillance should also be possible, especially by correct disposition of lighting and design of greenery.

In housing estates it is essential to create a mix of housing types (from apartment blocks to detached houses), bring in different age and income groups and - as much as possible – diversify activities in an area, thus allowing the presence of inhabitants all day long.

2.1 Building design

Most of the obstacles should be placed in public places. In the points of transition between public and private space for particular buildings, careful selection of burglary proof doors, use of protective locks, correct positioning of viewing holes and mailboxes and also certain technical solutions for windows, sliding doors and conservatories are suggested.

Buildings with more than eight owners (flats), should have surveillance cameras mounted or janitors employed. The backs of buildings shouldn't be accessible to the public.

Other suggestions include the compulsory installation of fire alarms and security lighting.

3. Planning Open Spaces

When planning and designing open spaces special attention has to be given to the potential fear of the inhabitants from possible hiding places, *where somebody could be lurking.* These are spaces along pedestrian passages, children's playgrounds or areas near entrances into houses or apartment blocks. Choice of greenery, bushes and trees can alleviate the feeling of fear and promote security.

3.1 Gardens and fences

Fences should be low, approximately to waist height, thus allowing views on front entrance doors and windows on the ground floor. Good fences are those which cannot be climbed across easily (trellis fixed on the top) or hedge-rows with a wire core. High boundary fences should be avoided, but if necessary other security features should be considered, thus still achieving surveillance and at the same time providing privacy to the people. On the other hand, in certain cases, a shaky panel fence can be a better deterrent than a built wall.

Back gardens shouldn't be accessed easily, i.e. via a common foot-path between the gardens. In fact, buildings should have as few accessible walls (including windows and doors) as possible from streets or paths. It is better if the back gardens have one common wall and a second access denied altogether.

3.2 Lighting

Surveillance and landscaping should function even after dark. Adequate lighting of open spaces must be provided on all public paths and roads. It is proven that better lighting can greatly reduce the incidence of criminal acts, especially burglaries, street violence and car theft.

3.3 Entrances

Entrances into a housing estate and passages through one should be allow natural surveillance. The same applies for entrances into individual flats or houses. Separation of public spaces from private ones is promoted. Service credit meters (gas, electricity, water) should be positioned in such a way, that they can be read without the official entering the private part of a house or flat, i.e. on the outer walls.

3.4 Parking lots

Parking spaces should be provided in places that can be naturally controlled, within the curtilage of dwellings. Drive paths, hard standings, car ports and garage entrances ought to be seen from the homes of the car owners. The best solution is having the parking spaces directly in front of the houses – but not at the risk of obscuring natural surveillance.

Communal parking is discouraged, if unavoidable they should be kept of the streets in well lit private, secure areas open to natural surveillance and in small groups, so that occupants can become familiar with the other car owners and notice intruders

4. Conclusion

The manual prepared by the Design Group however promotes very closed types of housing estates, for example *cul de sacs* – groups of buildings with only one entrance or exit, only one of the possible urban layouts, thus unnecessarily intervening in the choice of urban layout as well. Security is an important feature of settlements, but understanding of security is also an element of culture, customs and behaviour patterns, differing from country to country and even between places.

Whether the number of burglaries into flats and houses, muggings or car theft since the beginning of the campaign decreased, we don't know ...

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Notes

[1] Secured by design is the copyright of the campaign run by the Chief Police Officers Union and Design Group. Granting of a certificate implies concordance given by the Police, that the building is designed according to security standards. The material presented in the article is a selection of measures collected in the »Victim of burglary folder" prepared by the Thames Valley Police.

[2] Newman describes the state of environment as defensible, nevertheless the effects of building a housing estate primarily based on individual fears or e.g. collective paranoia can be counterproductive. Defensible certainly doesn't mean the construction of „modern" fortresses, bunkers etc., but implies surveillance of open spaces, correct design of streets, pedestrian paths and cycling routes, adequate positioning of entrances, simple recognition of spaces and above all, recognising ones neighbours.

Illustrations:

Figure 1: *The logo*
Figure 2: *Prospect issued by the Police Design Group*
Figure 3: *The checklist for secure design*
Figure 4: *The basic security points from the checklist*

Mojca GOLOBIČ

Children in the city

„Ljubljana"

(The answer of an eleven years old schoolchild to an interview question about his favourite playing place).

Abstract

Child's play is a spatial and social activity, its contents and course being closely related to the whole of the child's living environment. Spatial limitation of playing in formal children's playgrounds is in contradiction with what the freedom of choice and a possibility to shape one's own environment mean to children. Children tend to play everywhere and anywhere. In urban areas children like choosing informal semi-public and public areas – such as streets, pavements, driveways or small green patches – for their play. Regardless, the fact that space is used by children differently than by adults, such planning could improve the quality of the environment also for the majority of other users.

Children understand and use space differently than adults

The needs of children and their relationship with the environment differ from the needs of adults. Children's functional and contextual knowledge about the environment exceedes the level of their understanding of configuration (1); this means that space and spatial elements are perceived by children primarily through the possibilities they offer, i.e. in the utilitarian context. A certain place is not recognized by children as a park, a playground, a garage, etc. It is rather seen as a place with various playing (climbing, running, hiding, sliding) possibilities. Fences are not percieved as boundaries or obstacles but are used as playing props.

The environs of home are especially important to a small child. Until children are around five years old, their emotional ties, their feeling of belonging to a certain place and their sentiment of local identity are connected with home. When children are growing older, they seek their places further away from home. Diversity and the possibility to choose have an important role in this process. With the child's research, the range of his/her space is increasing in terms of size as well as differentiation. To schoolchildren, playing means primarily research and the expansion of spatial and social environment. The need to deepen understanding of the latter appears approximately at the age of 12. Besides the environs of home, streets have an important role, offering possibilities for the activities that enhance child's flexibility, expand his range and increase the number of his/her experience and contacts with other children. The search for and the creation of places is one of the most important qualities of a child's relationship with the environment, while the freedom of choice and releasing of creative energy of individuals as well as groups are of key importance for child's individualization. Therefore, large importance is attributed to places without a precisely defined use and playing props – these places are considered real „free" places. Their attractiveness is in their openness and anonimity which stimulates