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## Evaluation of Deterioration of Rural Buildings in Poland

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### Summary

The Sudeten Region covers the south-west part of Poland. The rural development in this region, with distinct features of specific regional architecture, shows now a considerable degree of technical and functional deterioration being the effect of drastic negligence in repair and modernisation over the last five decades. Basing on the selected types of deterioration, an analysis of age distribution as well as assessment of wear and deterioration level of rural development in this region was presented. The analysis is limited to the area of Klodzko Valley located in the eastern part of the region under study. Also a scope of damages resulting from this year flood which dramatically worsened the state of existing building resources is indicated.

**Keywords:** rural buildings, deterioration of buildings, modernisation

### 1. Sudeten Region

South-west region of Poland, a Sudeten Region covering the Jelenia Góra and Walbrzych Voivodships, belongs to the most developed areas of the country, where the impact of slower economic expansion is particularly acute. This is a consequence of the fact that being rather insignificantly destroyed during the World War II this area was not financed in the field the repairs and modernisation to the same extent as the other regions of Poland. This caused that the real property in this area became worn in about 60% with consequential negative effects on the local social and economic relations, so that since the 70s this region is considered as an „*eminent problem region*”. Another cause which added to this was undefined property law and resulting from this the lack of responsibility for the technical state of existing buildings.

In the Sudeten Region there are the biggest building resources of the country but 75.8% of them were erected before 1945, including 34,6% erected even before 1918, what, in the view of permanent lack of repairs and modernization, has led to the avalanche deterioration. This process was particularly intensive in the eastern part of Sudeten Region, in Klodzko Valley (Grafschaft Glatz), where to the functional and technical deterioration of the building resources common for the whole region, the tragical effects of flood in July 1997 were added, which particularly severely affected this region making damages in the substantial part of municipal and rural resources situated on river banks.

## 2. Devastation of buildings in Klodzko Valley

The housing resources in Klodzko Valley amount to 201 176 dwellings, a 25,3 % of which is on the rural areas. The rural development exhibits so-called *technical deterioration of components and building itself* (due to age), so-called *functional deterioration* (loss of functional qualities) and damages caused by July flood.

From the analysis of technical deterioration of this development, it results that 54.4 of the buildings were erected before 1918 (including 47.3 % of masonry and 7.1% of wooden buildings) which are now at least 79 years old; 37.4 % of buildings were erected in the inter-war period (1919-1944), (including 35.2 % of masonry and 2.2 % of wooden buildings), which are now from 80 to 53 years old; 8.2 % of buildings were erected after 1945 (including 7.8 % of masonry and 0.45 % of wooden buildings). From this analysis it follows further that the wooden buildings, amounting to 9.3 % of total housing resources are in poor technical state and have an average deterioration level above 51% and only 0.4 % of buildings erected after 1945 shows the medium technical state, i.e. the deterioration within 18.6-34.4 %. 35.2 % of masonry buildings shows the medium deterioration within the range of 18.6-33.5 % while 47.3 % of them exceeded the stage of medium deterioration. The post-war development amounting to 9.7 % of total resources shows the medium deterioration (up to 18.2 %) and falls into the category I (good technical state). The technical deterioration above 51 % (poor technical state) was reached by the wooden buildings erected before 1918 and in inter-war period (9.3%). Deterioration within 31-50% (medium state) show the masonry buildings erected before 1918 while the buildings erected in the inter-war period and post-war wooden buildings (totally 82.9% of the housing resources on this area) are approaching this state. The buildings erected after the World War II show now deterioration up to 30

These have lost also their functional and aesthetic qualities. Due to age distribution of this development and lack of repairs 54.4% of buildings approach the limit of functional deterioration which is assumed to be 90 years. About 42% of dwellings are without bathrooms, 63% have no WCs and 28% are without sanitary system. Presently, this situation is even worse due to damages caused by flood in July 1997. A full scope of damages is now difficult to determine precisely since in the winter, the frozen water in soaked walls will surely cause additional damages.



*Fig 1. Sudeten development destroyed by the flood in 1997.*

## Conclusion

The Sudeten Region with substantially deteriorated housing resources, after transformation of 90s connected with restoration of property law and responsibility of owners for the state of their property, is now under preparation to modernisation of the existing development basing on the programs which enable also to retain the regional character of local architecture.