Geophysical Research Abstracts,
Vol. 10, EGU2008-A-00868, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-00868
EGU General Assembly 2008

Dynamics of surface water balance over the East-European Plain during the second part of the 20th century

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During the second part of the 20^{th} century more important elements of the surface water balance exhibited significant changes over the Great Russian Plain.

Soil moisture increasing was observed practically in all natural zones. In the past 10-15 years soil moisture values exceeded the level of the field capacity at some stations. Moreover, maximal soil moisture increasing was fixed during the summer-autumn period. Winter water content increased as well, especially in the forest zone. Only in the dry steppe zone soil moisture growth was observed in the winter-spring season. It should be also noted that the most intensive changes in the soil water content were fixed within the transition zones and especially in the steppe zone.

These changes in the soil water regime inevitably affect the regime of evaporation from the soil surface. Actual evaporation increased in all natural zones except the dry steppe zone. In this zone actual evaporation decrease was fixed. Similar soil moisture, the most intensive actual evaporation changes were observed within the transition zones and especially in the dry steppe zone.

Despite evaporation increasing, soil overmoistening affects the agrophysical soil properties. Processes of chernozems' leaching, bogging and desertification of soil settled into critical phase. Soil degradation is sometimes of irreversible character