

Curriculum vitae/Professional career/Key activities

Prof. Dr. Wolfgang Burghardt, retired
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EDUCATION and PROFESSIONAL CAREER

1960/62 Farm apprenticeship.

1962/66 Studies of agricultural engineering at the University Kiel, Germany. Specialisation on crop production and soil amelioration. Graduation engineer of agriculture.

1970 PhD with Prof. Dr. Schönhals at the Institute of Soil Science at the University Gießen, Germany, about 'Investigations by the double ring infiltrometer method about the infiltration characteristics of the soils of the southern Highland of Jordan'.

1994 Habilitation in Soil Science about 'Waterhousehold of peat soils' at the University Essen.

PROFESSIONAL EMPLOYMENT and KEY ACTIVITIES

1967/1970 Investigations on saline soils and desert soil quality for irrigation with the Federal Institute for Geosciences and Natural Resources (Bundesanstalt für Bodenforschung, today für Geowissenschaften und Rohstoffe/BGR), Hannover, Germany

1970/1983 At the Institute of Soil Technology, Bremen/Germany, of the State Office for Geology of Lower Saxonia (Niedersächsisches Landesamt für Bodenforschung/NLfB/Germany) applied research inclusive field trials and stations on problems of soil physics, soil water household, soil structure, soil amelioration (deep loosening, deep plowing, drainage, liming) of marsh, sandy and peat soils; and drainage filter function and clogging, flower pot earth, effects of groundwater table lowering, landfill soil cover, lagoon deposits of harbor, river and lake sludge. Member of the Drainage Committee of the German Association of Water and Soil Amelioration Techniques (DVWK).

1978/1983 Lectureship in soil science and soil use for students of biology at the University of Bremen

1983/2005 Professor for Soil Technology at the Institute of Ecology of the University of Essen, Germany, lectures in courses of ecology and landscape architecture.

Change of main research objectives to problems of soils of urban, industrial, traffic and mining areas.

Objectives of soil research on urban areas are soil morphology and soil formation; pollution and balances of heavy metals, nutrient content, C-, N-, P-accumulation and balances; storm water infiltration in urban soils; soils as sources of fine dust (PM₁₀); effects of different ground uses (such as vegetable garden, street border strip and street tree patches, park, railway siding, play and sport ground, street and sidewalk, abandoned industrial and mining areas, burial ground) on soils; sealing of soils; man-made materials such as sewage sludge, ashes, rubble, slag; reclamation of mining soils

(hard coal, copper mining), remediation of soils from coke plants; soil pollution investigation for housing planning; soils of archeological sites.

On agrarian and forestry areas investigation of heavy metal, C-, N-, P- balances, acidification, soil compaction and structure, water erosion. Objectives of studies of nature heritage areas were C-, N-, and water balances, and quality of abandoned industrial and mining areas and quarries as nature reserve areas.

2005 Retirement.

From 2005 Still at the University Duisburg-Essen; analysis of research projects; organization of national and international conferences and symposia.

Activities abroad i.a. in Spain, France, Greece, Jordan, Syria, Iran, China, Malawi.

ACTIVITIES IN NATIONAL and INTERNATIONAL SOCIETIES/ORGANZATIONS

1976/1988 Member of the Drainage Committee of the German Association of Water and Soil Amelioration Techniques (DVWK).

1977/1982 Member of the working group soil science (Arbeitsgruppe Bodenkunde) of Geological State Offices and Federal Institute for Geosciences and Natural Resources of the Federal Republic of Germany. Preparation of the Soil Survey Instruction, 3rd edition (1982); responsible for peat and half bog soils.

1987/2007 Establishment and chair of the Working Group ‘Urban Soils (AKS)’ of the German Soil Science Society.

1991/1995 Member of the Alfred Wegner Society for Geosciences; member of organization committee of Geotechnica fair and congress 1993 und 1995.

1995 Founder member of German Federal Soil Association (BVB).

1996/2000 Chairperson of professional group ‘Soil Techniques’ of the German Federal Soil Association (BVB).

1998/2007 Establishment and chair of the International Working Group SUTMA (Soils of Urban, Industrial, Traffic and Mining Areas (SU)’ of the International Union of Soil Science (IUSS).

2000 Organization of the First International Conference on Soils of Urban, Industrial, Traffic and Mining Areas (First SUTMA conference), Essen, July 12-18, 2000.

2002/2010 Chair of Division 3 - Soil Use and Management of the International Union of Soil Science (IUSS).

2003/4 Member of the Advisory Group and Working Group Research of the European Soil Thematic Strategy of the European Commission. Responsible for the chapters ‘Sealing Soil, Soils of Urban Areas, Land Use and Land Use Planning’ and ‘Soil Conservation Service’.

2010 Organization of the international Conference of IUSS on “Soil Fertility and Soil Productivity” at the Humboldt University zu Berlin, Germany.

1987/2016 Organization of numerous national urban soil conferences and symposia about urban soils, soil fertility and soil heat on international congresses.

Essen, September 5, 2018

PUBLICATIONS (q.v.)