References

1. Lejcuś K, Dąbrowska J, Garlikowski D and Kordas L. Water loss from soil and water absorbing geocomposite. *International Proceedings of Chemical Biological & Environmental Engineering, Environmental Science and Technology VI* 2015; 84: 123-127.
2. Górski T, Kozyra J and Doroszewski A. Field crop losses in Poland due to extreme weather conditions – case studies, In: *The Influence of Extreme Phenomena on the Natural Environment and Human Living Conditions*, S Liszewski (ed). Łódzkie Towarzystwo Naukowe 2008, 35-49.
3. Stephenson DB. Definition, diagnosis and origin of extreme weather and climate events (Chapter 1), In: *Climate Extremes and Society*, RJ Murnane & HF Diaz (eds.), Cambridge University Press 2008, p. 348.
4. *IPPC. Climate Change 2001. The Scientific Basis. Contribution of the Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change*, JT Houghton, Y Ding, DJ Griggs, M Noguer, PJ van der Linden, X Dai, K Maskell, CA Johnson (eds.), Cambridge University Press, Cambridge, United Kingdom and New York, New York 2001, p. 881.
5. Frich P, Alexander LV, Dell-Marta P, Gleason B, Haylock M, Klein Tank A M G and Peterson T. Observed coherent changes in climatic extremes during the second half of the twentieth century, *Climate Research* 2002; 19 (3): 193-212.
6. Miętus M. Ekstremalne zjawiska klimatyczne z perspektywy IPCC, In: *Ekstremalne zjawiska hydrologiczne i meteorologiczne*, E Bogdanowicz, U Kossowska-Cezak, J Szkutnicki (eds.), PTFG, IMGW, Warszawa 2005: 19-31.
7. Connor R, Faurès J-M, Kuylenstierna J, Margat J, Steduto P, Vallée D, van der Hoek W. *Evolution of water use. UNESCO*, 2012. http://webworld.unesco.org/water/wwap/wwdr/wwdr3/pdf/18_WWDR3_ch_7.pdf [Access 18.03.2015].
8. *Woda i rolnictwo wobec zmian klimatu*, Copa-Cogeca 2011. http://www.copa-cogeca.be/img/user/file/FT_EN/DOC/5660PL.pdf [Access 18.03.2015].
9. Farrell C, Ang XQ and Rayner JP. Water-retention additives increase plant available water in green roof substrates. *Ecological Engineering* 2013; 52: 112-118.
10. Abedi-Koupai J, Sohrab F and Swarbrick G. Evaluation of Hydrogel Application on Soil Water Retention Characteristics. *Journal of Plant Nutrition* 2008; 31(2): 317-331.
11. Sivapalan S. Some benefits of treating a sandy soil with a cross-linked typepolyacrylamide. *Australian Journal of Experimental Agriculture* 2006; 46(4): 579-584.
12. Agaba H, Orikiriza LJB, Esegu JFO, Obua J, Kabasa JD and Hüttermann A. Effects of hydrogel amendment to different soils on plant available water and survival of trees under drought conditions. *Clean – Soil, Air, Water* 2010; 38 (4): 328-335.
13. Guilherme MR,·Aouada FA,·Fajardo AR, Martins AF,·Paulino AT, Davi MFT, Rubira AF, and Muniz EC. Superabsorbent hydrogels based on polysaccharides for application in agriculture as soil conditioner and nutrient carrier: A review. *European Polymer Journal* 2015; In Press, doi:10.1016/j.eurpolymj.2015.04.017.
14. Morris CE. Unsaturated flow in nonwoven geotextiles. *GeoEng 2000: An International Conference on Geotechnical and Geological Engineering*, Melbourne, Australia, 2000, Vol. 2, p. 322.
15. Iryo T and Kerry Rowe R. On the hydraulic behavior of unsaturated nonwoven geotextiles. *Geotextiles and Geomembranes* 2003; 21: 381-404.

16. Bouazza A, Zornberg JG, McCartney JS and Nahlawi H. Significance of unsaturated behaviour of geotextiles in earthen structures. *Australian Geomechanics* 2006; Vol. 41, 3: 133-142.
17. Zornberg JG, Bouazza A and McCartney JS. Geosynthetic capillary barriers: current state of knowledge. *Geosynthetics International* 2010; 17, 5: 273-300.
18. Azevedo M and Zornberg JG. Capillary barrier dissipation by new wicking geotextile. In: *Advances in Unsaturated Soils,* Caicedo et al. (eds), Taylor & Francis Group, London, 2013: 559–565.
19. Hejduk S. *Evaluation of rootzone mixes and water retentive amendment materials in sports surface constructions*. Report to the Stapledon Memorial Trust. Brno, Czech Republic, 2010, p. 12.
20. Dąbrowska J and Lejcuś K. Charakterystyka wybranych właściwości superabsorbentów. *Infrastruktura i Ekologia Terenów Wiejskich* 2012; 03(4): 59-68.
21. Orzeszyna H, Lejcuś K, Garlikowski D and Pawłowski A, *Element geokompozytowy, zwłaszcza do wspomagania wegetacji roślin (Geocomposite element, particularly for enhancing plant growth)*. Patent No. EP2560472, PL211198, patent application US20130031831 A1, 2015. Entitled to the *patent:* Wrocław University of Environmental and Life Sciences.
22. Rowe RK (ed). Geotechnical and Geoenvironmental Engineering Handbook. Springer US, 2001, Vol. 1, p.1088.
23. McIsaac R and Kerry Rowe R. Effect of filter-separators on the clogging of leachate collection systems. Can Geotech J 2006; 42: 674-693.
24. Stormont JC, Ray C and Evans TM. Transmissivity of a Nonwoven Polypropylene Geotextile Under Suction. Geotechnical Testing Journal 2001;Vol. 24, 2: 164-171.
25. PN-EN ISO 9864:2007. Geosyntetyki - Metoda badań do wyznaczania masy powierzchniowej geotekstyliów i wyrobów pokrewnych.
26. PN-EN ISO 9863-1:2007. Geosyntetyki - Wyznaczanie grubości przy określonych naciskach -- Część 1: Warstwy pojedyncze.
27. PN-EN ISO 10319:2010. Geosyntetyki - Badanie wytrzymałości na rozciąganie metodą szerokich próbek.
28. PN-EN ISO 11058:2011. Geotekstylia i wyroby pokrewne - Wyznaczanie charakterystyk wodoprzepuszczalności w kierunku prostopadłym do powierzchni wyrobu, bez obciążenia.
29. PN-P-04734:1972. Metody badań wyrobów włókienniczych - Wyznaczanie wodochłonności.
30. *Capillary Flow Porometer,* Version 6.0, 1997, p. A-12.
31. Jena A and Gupta K. Characterization of Pore Structure of Filtration Media. Fluid Particle *Separation Journal* 2002; Vol. 14, 3: 227-241.
32. Grzybowska-Pietras J and Malkiewicz J. Influence of Technologic Parameters on Filtration Characteristics of Nonwoven Fabrics Obtained by Padding. *Fibres and Textiles in Eastern Europe* 2007; 5-6: 82-85.
33. Lejcuś K, Dąbrowska J, Garlikowski D, Śpitalniak M. The application of water-absorbing geocomposites to support plant growth on slopes. *Geosynthetics International* 2015; In Press, doi:10.1680/jgein.15.00025.
34. Wróblewska K, Dębicz R, Bąbelewski P. The influence of water sorbing geocomposite and pine bark mulching on growth and flowering of some perennial species. *Acta Sci.Pol. Hortorum Cultus* 2012; 11(2): 203-216.
35. McCartney JS, Kuhn JA and Zornberg JG. Geosynthetic Drainage Layers in Contact with Unsaturated Soils. *16th ISSMGE Conference: Geotechnical Engineering in*

Harmony with the Global Environment. 12-16 September 2005. Osaka, Japan, 2005, 2301-2305.