

Waste stabilization ponds: Past, present and future

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ABSTRACT

The 'past' of waste stabilization ponds (WSP) is due to early experience and design codes in the USA and also to two pioneering researchers, Oswald and Marais. The 'present' of WSP dates from the mid-to-late 1970s and is characterized by large numbers of full-scale systems in France, Germany and the USA. Research expanded greatly in several universities around the world, and much more is now known about pathogen and nitrogen removal in WSP, design procedures, WSP hydraulics and the benefits of baffling, and facultative pond effluent polishing in aerated and unaerated rock filters. Several design manuals, books and reference works have been published. The 'future' of WSP should see many more systems, including wastewater storage and treatment reservoirs, installed in both industrialized and developing countries, with pond/reservoir effluent reuse in aquaculture and agriculture, so making a large contribution to global food production.

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