

Hydraulic Engineering System in Ancient India

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Water is one of the most important key element of life from the very beginning of our mother Earth. The water is used for day today life. It makes the most important factor for formation of life. The chemical properties of water effect on the functions of the body and mind of human beings. Depending on the physical, chemical, regional conditions with some few other factors, the water hydraulic engineering system and techniques developed accordingly. Indian ancient literature Sanskrit has given many interesting information about different types of management system managed by ancient people. Those people were also developed conservation and purification techniques for water aquifer. The study is mainly focused on the water management system and techniques in ancient period. Some ancient water management system and techniques were like Pond, Nahar, Ahar-pyne, Zabo, Kund, Kul, Bamboo Drip irrigation system etc are still very helpful for biodiversity. This topic supports that our ancient peoples were also efficient in carrying out water analysis and treatment of water scientifically in a simple manner. They were also aware of maintaining ecological balance for the welfare of mankind.

Keywords : Pond, Nahar, Ahar-Pyne, Baoris, Zabo, Kul, Bamboo Drip Irrigation System etc.

Linking Ancient Wisdom Ayurved with Modern Science

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Human individuals are genetically different from their parents as well as their siblings and hence different transcriptome and proteome which consequently lead to different metabolome. Differential metabolic capabilities of individuals are the reason behind the good and bad health, more and less adaptability in a new environment, and more importantly good and bad response towards the treatment of a particular ailment. Hence, a method of treatment, based on individual's unique genetic constitution, is needed to cure ailments at individual level. Although, personalized medicine is partially serving that purpose but our ancient traditional practice, *Ayurveda*, has a fundamental aspect of diagnosing patients based on their psycho-somatic-constitution (phenotype) which has a genetic basis (genotype), called *Prakriti* (Vata, Pitta, Kapha) and prescribing treatments accordingly. No modern studies, but one by the Indian scientists, has convincingly correlated genetic variation with the classification of prakriti by performing genome-wide SNP (single nucleotide polymorphism) analysis of 3416 subjects belonging to three prakritis. Analysis of these SNPs revealed that about 52 genes might be responsible for individual's doshas or prakritis. Dr. Thangaraj and his group has taken this study further and attempted to see if the samples collected randomly, without any information on their prakriti, would also fall into three groups after the analysis based on the 52 SNPs, which appear to be important.

Key words: Single Nucleotide Polymorphism (SNP), Genome-Wide Analysis, Prakriti, Personalized Medicine