

Thursday 20, Miragaia Room

SPECIAL SESSION: ACCELERATING THE ADOPTION OF ALGAE-INTEGRATED WASTEWATER RECLAMATION, RECOVERY, AND REUSE OF WATER, ENERGY, AND ALGAE

In this workshop, experienced experts will present and discuss wastewater reclamation that includes the recovery and reuse of (1) recycled water, (2) renewable energy, and/or (3) algae biosolids. The case studies will illustrate the advantages of algae-based wastewater systems over more conventional electro-mechanical wastewater reclamation facilities. The case studies will quantify costs (capital, operational, and life cycle), energy intensity, GhG emissions, degree of circularity, and Sustainability Development Goal 6 compatibility and advancement. The range of choice for reusing recycled water, renewable energy, and algal biosolids is constrained by the quality of each co-product. In the State of California for instance recycled water reuse options include groundwater recharge, stream discharge, crop, forest, and landscape irrigation, fire protection, indirect and direct potable reuse. We will compare the value of algae carbon capture and medium and long term storage options versus algae-based bioenergy, biofertilizer, protein-rich animal feeds, and bioplastic shoe manufacturing. In conclusion we will examine the obstacles that have inhibited more widespread adoption of these sustainability quality and goals and end by brainstorming how best to optimize and accelerate dissemination and deployment of Algae-Based Wastewater Reclamation with Reuse of water, energy, and algae.

14:45 FRANKLIN BAILEY GREEN WORKSHOP OBJECTIVES AND INTRODUCTIONS OF INVITED PRESENTERS AND DISCUSSANTS

14:50 FRANK ROGALLA BIOENERGY AND WATER RECOVERY BASED ON MICROALGAE--CHICLANA, SPAIN CASE STUDY

15:10 HOWARD FALLOWFIELD TRANSITIONING HIGH RATE ALGAL PONDS FOR WASTEWATER TREATMENT FROM RESEARCH TO ADOPTION IN SOUTH AUSTRALIA--PETERBORO, AUSTRALIA CASE STUDY

15:30 FRANKLIN BAILEY GREEN NATURE-BASED SOLUTIONS FOR SUSTAINABLE SANITATION--VARANASI, INDIA AND LOS OSOS, CA USA CASE STUDIES

15:50 COFFEE BREAK & EXHIBITION

16:10 FOUR INVITED EXPERTS DISCUSSANTS' INITIAL COMMENTS

16:30 OPEN DISCUSSION AND FINAL RECOMMENDATIONS

17:30 END