The SETAC Sponsored Technical Workshop on Freshwater Salinisation took place at the Burg Ludwigsstein Castle (Germany), from March 10th to 13th of 2014. It was sponsored by the German Limnological Society (Deutsche Gesellschaft für Limnologie, www.dgl-ev.de), Hydrobios (www.hydrobios.de), and Sea and Sun Technology (www.sea-sun-tech.com). We had participants coming from Argentina, France, Germany, South Africa, Spain, USA and Uzbekistan, representing different institutions (e.g. government agency, mining industry, environmental consulting and university).

One of the main conclusions of the workshop was the need for regulation of salt concentration in freshwaters. Salinization is known to impair biological quality, damage ecosystem services (e.g. food security by reducing fish catches and making water unsuitable for irrigation of salt sensitive crops), and increasing risks to human health (e.g. kidney diseases). Therefore, it has a crucial role in the definition of ecological and chemical status within the Water Framework Directive. In spite of this, regulatory policies often lack a strong scientific basis and are poorly implemented, if at all. Good policy requires a sound scientific underpinning, but many uncertainties currently exist regarding how salinity affects both environmental and human health. For example, the chemical constituents that contribute to salinity vary in space and time, but we know little regarding the relative importance of different constituents (ions) to ecological and human health. Does salinity interact with other stressors such as toxic metals and organic contaminants of anthropogenic origin, and in what ways? How does salinity affect trophic interactions that are critical drivers of ecosystem function, and ultimately the services human gain from water?

The workshop led to a COST action that is now being evaluated. If successful, the COST action would allow us to organize more workshops in the future, as well as training activities, short research stays and science dissemination actions. The final aim of this network is to promote collaboration between countries and disciplines and across all sectors of society to find a balance between the exploitation of natural resources and the ecosystems’ integrity.