

Presentation

A California-European Union-Australia Workshop on SGMA Implementation, Economic Issues, Water-Energy-Food Nexus: Comparison and Lessons Learned from European Union and Australia

Although the adoption of SGMA is considered as a positive development in the management of groundwater, its implementation is not always as effective as it should be, and gaps may exist between the law as it has been conceived and written and the reality of its implementation. Major issues of concern are inadequate legislation with possible governance gaps; budgetary constraints as some local government organizations may have difficulty in accommodating SGMA technical requirements; economic aspects as significant investments in adequate infrastructure development for groundwater management are needed, as well as technical advice and help with building organizational expertise; public participation with a more transparent approach and equitable water management; groundwater resilience, especially related to climate change; and conflict resolution between stakeholders.

A workshop will be held on-line on November 8 and 9, 2021, with the objective of checking the status of SGMA implementation and helping find practical answers to the major issues of concern. It will gather experts from the European Union and Australia during a day and a half to explore alternative solutions experienced in these countries and compare to the California situation. The European Union has adopted the 2000 Water Framework Directive and the 2006 Groundwater Directive whose implementations are facing similar problems as the implementation of California 2014 SGMA, while Australia, facing severe drought issues, has developed innovative methods to better managing its water resources and dealing with overdraft and overuse of groundwater, such as conjunctive use of ground and surface water, managed aquifer recharge, groundwater trading and banking, as well as economic instruments for the pricing of groundwater and its value.

The workshop, conducted as a Zoom meeting, is **free of charge**, and to register please send *Last Name, First Name, Role/Title, Organization, Email (or phone)* to

DCirillo@ocwd.com with a copy to: jfried@uci.edu and ahutchinson@ocwd.com

Guidelines on how to join and use the Zoom facility will be sent to the registered participants a few days before the workshop.



Workshop Program

SGMA Implementation, Economic Issues, Water-Energy-Food Nexus: Comparison and Lessons Learned from European Union and Australia A California-European Union-Australia Workshop

November 8, 2021

Introduction

08:00-08:15 (05:00pm-05:15pm France)

Welcome by *David Feldman (Water UCI) & Mike Markus (OCWD)*

08:15am-08:30am (05:15pm-05:30pm France)

Presentation of the objectives, format and expected output of the workshop *J. Fried, (UPPP, UCI)*

Session 1 California-EU

Facilitator/Co-host: Steven Springhorn (California Department of Water Resources, Sacramento)

08:30am-09:00am (05:30pm-06:00pm France)

Guest Presentation: Status of SGMA Implementation

With 85% of Californians depending in some way on groundwater, SGMA's objective is to answer the need for well-defined management of groundwater through a combination of state mandates and local management. What are the results, successes, delays? Have financing needs been correctly assessed? What are the equity aspects? Do social conflicts and governance gaps still exist? How effective is SGMA with respect to improving groundwater resilience?

One California panelist, 30mn presentation, to set the scene: Steven Springhorn, (California Department of Water Resources, Sacramento)

09:00am-10:30pm (06:00pm-07:30pm France)

Topic 1: EU Water Framework Directive/Groundwater Directive Implementation Status compared to SGMA Implementation

In 2019, the EU conducted a fitness check to evaluate progress of the Water Framework Directive following 20 years of implementation. The fitness check found that implementation had partly achieved "good" status for surface water and groundwater quality. This topic

explores the underlying factors that contributed to success, and failure, in achieving higher water quality.

*1 EU panelist at EU level, 30mn presentation : Elisa Vargas-Amelin (EU Commission, Brussels)
1hr discussion comparing WFD/GWD and SGMA, with the EU panelists*

10:30am-12:30am (07:30pm-09:30pm France)

Topic 2: Economic Dimensions of the EU Water and Groundwater Directives

1 EU panelist at EU member state level, 30mn presentation: Eric Tardieu (OIEau International Office for Water, Paris, France)

Topic 3: Costs, Tariffs and Billings of Groundwater, Equity, and Active Public Participation

1 EU panelist at EU member state level, 30mn presentation: Bernard Barraqué (AgroParisTech, Paris, France)

The EU water directives provide a useful example to explore the economic impacts of new groundwater quality policies and regulations. The EU experience will be examined and compared to the costs associated with SGMA implementation (engineering, infrastructure, organizational and governance), including possible conflicts between users. The cost of water is of direct interest to the users and their involvement in its evaluation and how it is recovered are part of governance. But is practice always on-line with theory? How about transparency? What about equity?

The goal of both topics 2 and 3 is to provide useful examples for California water managers as they continue groundwater focused management plan development and implementation, stressing their economic dimensions.

1hr discussion on both topics 2 & 3, with the EU panelists

Session 2 California-Australia (Day + 1 in Australia: Nov. 9, 2021)

Facilitators/Co-hosts: Erik Ekdahl (SWRCB) and Craig Simmons (Flinders U, Adelaide SA, Australia)

01:30pm-05:30pm (08:30am-12:30am Nov. 9, 2021 Canberra)

Topic 4: Groundwater Scarcity and Resilience: Policy, Legal, Economic, and Technical Issues and Answers

The goal of session 2 is to benefit from Australia experience in its reform of groundwater right/use following the Millenium Drought: for instance, understand mechanisms of change, such as communication with stakeholders and conflict resolution, and the possible role of incentives; which responses in terms of infrastructure development and funding for groundwater capture and recharge, more specifically Managed Aquifer Recharge (MAR) including Flood-MAR; which regulatory policies for groundwater recharge, and other questions such as ownership, fees, water rights and funding which may depend on the source of water. Session 2 also examines the Water/Energy/Food Nexus paradigm, for instance the use of energy for groundwater (moving, treating and extracting it), the water conservation plans

as a possible climate change strategy, the relationships between urban and rural water conservation strategies, and the effects of the combination of drought, market, and regulatory forces on food production, in terms of bulk volume, prices, or types of crops produced.

4.1 Guest Presentation: Challenges and Changes, Introductory Overview

1 AUS panelist, 30mn presentation, to set the scene: Craig Simmons (Flinders University, Adelaide SA, Australia)

4.2 Groundwater Recharge/Managed Aquifer Recharge/Alternative Supplies

1 AUS panelist, 30mn presentation: Peter Dillon (CSIRO, National Centre for Groundwater Research and Training-NCGR)

4.3 Water/Energy/Food Nexus

1 AUS panelist, 30mn presentation: Quentin Grafton (Australian National University)

2hrs general discussion with the AUS panelists+ 30mn conclusion by the facilitators

November 9, 2021

Session 3 California-EU

Facilitator/Co-host: David Feldman (Water UCI)

8:00am-09:30am (05:00pm-06:30pm France)

Topic 5: Groundwater Scarcity and Resilience: The Water-Energy-Food Nexus paradigm

Recent drought events in the EU, California, and Australia have raised questions regarding how water managers should prioritize available resources, and how such prioritizations may affect other economic groups and related cohorts. This session examines the water-energy-food nexus, with focus on examples where food and energy production were changed in order to achieve water security. The session also highlights the potential for unintended consequences, redirect impacts (both positive and negative), and how those impacts were addressed by stakeholders.

1 EU panelist 30mn presentation: Jacques Ganoulis (Em.Prof. Aristotle U. Thessaloniki, Greece)

1hr discussion comparing the EU Mediterranean situation and California, with the EU panelists

09:30am-11:30am (06:30pm-08:30pm France)

Topic 6: Conflict resolution and role-play

Assessment of conflicts, techniques of management and resolution of conflicts: presentation and role-play

1 EU panelist as Co-host and Facilitator: Lena Salamé (Lawyer, Paris, France)

Attendees will be divided up into groups of 10 (break-out rooms)

Conclusion

11:30am-12:30pm (08:30pm-09:30pm France)

General discussion and adoption of conclusions

Two rapporteurs (Erik Ekdahl & Jacques Ganoulis)

12:30pm-12:45pm (09:30pm-09:45pm France)

Final words

Perspective for the future and thanks *J. Fried*

End of workshop