



Water-energy-food security nexus: the road map

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The world's growing population and increased prosperity will increase global demand for energy, as well as food and water supplies in the coming decades. In the arid and semi arid regions as in most of the world water and energy have historically been managed separately, with little consideration of cross sectoral interactions, yet in reality, water and energy are closely interconnected. By addressing water and energy together planners can identify crucial interactions, conflicting demands and potential synergies. For many countries around the world it is needed to establish a road map on: (i) how to implement nexus policies to increase efficiency of natural resources management? (ii) how to bridge science with policy and business? (iii) how governments be inspired by business? (iv) how can be business be inspired by science? (v) how can we learn from each other and how collaborate to address the challenges ahead? Such road map should seek to bring together stakeholders involved in the nexus implementation approach over the coming years to develop nexus tools for decision making to quantify water energy food resources on both national and regional level. However, experiences gained and learned lessons indicate clearly that numerous countries are facing several barriers in putting in action their nexus road map due to the lack of integrated resource management, lack of capacity for research development, lack of knowledge sharing across sectors, and not enough interaction between policy makers and scientists. Those are major challenges to be faced to achieve the water, energy and food security nexus. Furthermore, such goal cannot be reached without building and strengthening the synergy between education, research and innovation for sustainable resource management. Those issues beside others will be fully discussed in this paper.

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