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Her research interests include water balance modeling, water-food-energy nexus, assessment of climate change impacts on water resources and water scarcity adaptation. She has been a member of several water and climate change related think tanks in the Ministry of Energy, Department of Environment, Chamber of Commerce, and National Water Resources Management Companies in Iran and also collaborated with FAO representation in Iran in various projects related to water scarcity and climate change adaptation. She served as the head of the scientific committees of a number of national and international conferences related to hydrology and water resources.

She has co-authored over 250 peer-reviewed publications in scientific journals and conference proceedings. She has edited, coauthored and authored 10 books and conference proceedings.

بنفشه زهرایی مدرک دکتری خود را در زمینه برنامه ریزی و مدیریت منابع آب از دانشگاه امیرکبیر (پلی تکنیک تهران)، تهران، ایران، در سال ۱۳۸۱ دریافت کرده است. وی از سال ۱۳۸۰ به عنوان مدرس در دانشکده مهندسی عمران دانشکده فنی دانشگاه تهران و همچنین به عنوان عضو و رئیس مرکز عالی مهندسی و مدیریت زیرساخت و معاون امور علمی موسسه منطقه ای آموزش آب (RIWE) که به طور مشترک توسط دانشگاه تهران، وزارت نیرو و یونسکو-تهران تأسیس شده است، بوده است. وی اخیراً به عنوان مدیر دفتر مدیریت مصرف آب و بهبود بهره وری با وزارت نیرو همکاری داشته است. وی همچنین از سال ۲۰۱۸ به عنوان دبیر کارگروه ملی سازگاری با کم آبی منصوب شده است.

علايق تحقيقاتي او شامل مدلسازي بالانس آب، همبست آب-غذا-انرژي، ارزيابي اثرات تغييرات آب و هوا بر منابع آب و سازگاري با كمبود آب است. وي عضو چندين موسسه تحقيقاتي مرتبط با آب و تغييرات اقليمي در وزارت نيرو، اداره محيط زيست، اتاق بازرگاني و شركت مديريت منابع آب در ايران بوده و همچنين با نمايندگي فائو در ايران در پروژه هاي مختلف مرتبط با كمبود آب و سازگاري با تغييرات آب و هوايي همكاري داشته است. وي به عنوان رئيس كميته هاي علمي تعدادي از كنفرانس هاي ملي و بين المللي مرتبط با هيدرولوژي و منابع آب خدمت كرده است.

او داوري بيش از ۲۵۰ مقاله در مجلات علمي و مجموعه مقالات كنفرانس را به عهده داشته است. او ويرايش و تاليف ۱۰ كتاب و مجموعه مقالات كنفرانس هاي متعدد را انجام داده است.

TOPICS FOR COLLABORATION WITH EU

WATER SCARCITY ADAPTATION

Recently, the government of Iran has taken steps to enhance the water resources governance by enhancing cross-sectoral coordination among governmental agencies. One of the important achievements has been the establishment of the National Water Scarcity Adaptation Committee (NWSAC). Established in March 2018, it has played a coordinating role among Ministries of Agriculture, Energy (water & electricity), and Interior (municipalities), Department of Environment, and National Planning and Budget, and Meteorological Organizations. Ministers and the heads of the aforementioned organizations are members of NWSAC. It also has Provincial Water Scarcity Adaptation Committees (PWSAC) associated to it. Heads of the provincial governmental and legal organizations related to water are members of the PWSAC. NWSAC receives provincial water scarcity adaptation plans from the PWSACs. These plans are assessed by the member agencies and if the plan is approved by the NWSAC, it can be a basis for budget management for various water related plans and activities.

So far, provincial water scarcity adaptation plans for 2 provinces have been approved and it is expected that by August 2019, the rest of the 29 plans will be processed in NWSAC. Lack of available funds for some elements of these plans, makes the time table of adaptation plans longer than what is necessary to save endangered ecosystems and stop migration waves from rural areas to cities. European Union (EU) can participate in implementation of one of the nationally approved water scarcity adaptation plans in a selected province to shorten the time span of implementation and ensure affectivity of interventions by benefitting from the best available technical solutions. Since these plans cover all aspects related to water scarcity, EU technical and financial support can be allocated to various projects foreseen in the selected provincial plan related to water resources conservation, governance, and demand management, controlling sand and dust storms, soil pollution and erosion control and environmental protection.

ENHANCEMENT OF ENVIRONMENTAL MONITORING

Even though Iran benefits from a large and technically up to date monitoring network for hydro-meteorological and environmental monitoring but still there is a huge gap between what is available and what can be the perfect status of the monitoring network. Major gaps, which can be filled through collaboration with EU are the followings:

- Enhancement of water quality monitoring
- Monitoring for disaster (flood/drought/sand & dust storm) forecasting and management including remote sensing and field measurements
- Online data collection
- National environmental data hub covering all types of data related to natural resources, weather, and climate