1. ACTIVITIES UNDERTAKEN IN THE PERIOD JUNE 2014 – MAY 2016

1.1 Meetings of the IHP National Committee

1.1.1 Decisions regarding the composition of the IHP National Committee

Major contributing members of Turkish hydrological community are the General Directorate of the State Hydraulic Works (DSI), General Directorate of Water Management (SYGM), Turkish Water Institute (SUEN), Turkish State Meteorological Service (MGM), Ministry of Food, Agriculture and Livestock Research Institutes, Universities and Private Sector.

During the last two years, it can be generally stated that the educational and technological capacities of the hydrometeorological services and organizational abilities at the national level have been improved. In order to achieve the function of coordination in a more efficient manner, many conferences and symposiums related to hydrology and its most prevalent subtopics have been held in order to enhance the knowledge sharing among the pivotal institutions in both national and international level.

With the establishment of the Ministry of Forestry and Water Affairs, the institutional structure of governmental water institutions has changed fundamentally. SUEN was founded “a new institution” as a think tank under the Ministry of Forestry and Water Affairs with the purpose of realizing the scientific experience and water vision. At present, SUEN intends to develop a national water policy in cooperation with other water related institutions and to provide opportunities for broader participation in international events. The second new institution is General Directorate of Water Management which is responsible for determining policies towards protecting, rehabilitating and utilizing water resources as well as preparing river basin management plans on a basin basis in order to protect and improve water resources. Electrical Power Resources Survey and Development Administration (EIE) was abolished and the water related tasks, especially hydrologic monitoring activities, of this administration transferred to DSI. Suleyman Demirel University Water Institute, Ankara University Water Management Institute and Hydropolitical Academy were established in order to carry out research studies on hydrology, hydropolitics, water quality etc. All newly established organizations are currently producing a multi-disciplinary, graduate-level education and qualified transparent training. They also aim to train researchers.

Within the scope of the UNESCO IHP activities, coordination of the newly established institutions has been carried out.

1.1.2 Status of IHP-VIII activities

1.2 Activities at national level in the framework of the IHP

1.2.1 National/local scientific and technical meetings

- TUHK Steering Committee meeting in 16th March 2015 in Istanbul.
- “Turkey’s Water Balance Estimation Workshop and Meeting on National Hydrology Commission of Turkey” was held on 16-20 March 2015 in Istanbul -Turkey.
1.2.2 Participation in IHP Steering Committees/Working Groups

- UNESCO National Commission High Level second Meeting, 1 November 20014, Antalya.
- UNESCO-IHP First Election Group Coordination Meeting, 21-22 October 2015, Brussels, Belgium.

1.2.3 Research/applied projects supported or sponsored

Some selected publications, projects and meetings listed below reflect current studies of Hydrology community of Turkey.

- Investigation of Rainfall-Runoff and Groundwater Relationship, Ege University, 2012-2016 (12-MUH-066).
- Assessment and improvement of existing irrigation water and nitrogen management in an irrigation district in the Mediterranean Region (AIMMED) TÜBİTAK Project No: 213O057 TÜBİTAK-ARRS (Slovenia) Cooperation Program, Program Code: 2508.
- Establishment of Decision Support system based on Spatial information technologies for Water Management in Seyhan River Basin, TÜBİTAK Project No: 115Y063.
- Monitoring and multi-scale modelling of irrigation return flow and its nutrient load in an agricultural area of Turkey (IRAFLUT) TÜBİTAK Project No: 113O151.
- Determination of Hydrological Cycle Parameters with a Conceptual Hydrological Models supported by TÜBİTAK (Grant Number 115Y041). (March 2016 – March 2019).
- Evaluation of soil moisture observations using hydrological model simulations and remote sensing-based retrievals observations supported by TÜBİTAK (Grant Number 114Y676). (July 2015 – July 2017).
- Analysis of the added utility of remote sensing-based soil moisture products to drought predictions via data assimilation techniques (Grant from Scientific and Technological Research Council of Turkey” supported by TÜBİTAK (Grant Number 113C007). (May 2013 – May 2015).
- Cloud Reduction Methods and Validation using Modified Satellite Products in the Mountainous Eastern part of Turkey Anadolu University BAP1207F117, 2012-2016.
• Development of statistical flow estimation models based on GIS in the Kızılırmak River Basin. TUJB 01-11 project. ODTÜ Civil Engineering, 2014.
• Developing an Operational Hydrologic Forecasting System using EPS and Satellite Data in Mountainous Euphrates and Seyhan Basins TÜBİTAK 113Y075 (1001 ÇAYDAG Project), 2013-2016.
• Advancement of Satellite Rainfall Applications for Hydrologic Modeling with Emphasis on Flood Monitoring (FLOODSAT), EU FP7 Marie Curie International Reintegration Grant (2011-2014).

1.2.4 Collaboration with other national and international organizations and/or programmes

• IAEA, International Atomic Energy Agency.
• JIIHP, Joint International Isotopes in Hydrology Program.
• IAH, International Association of Hydro-geologists.
• IAHS, International Association of Hydrological Sciences.
• TUBITAK, Scientific and Technical Research Council of Turkey.
• NIMH, Bulgarian National Hydrology and Meteorological Institute.
• UNESCO, Division of Water Sciences, International Hydrology Program.
• UNESCO, FRIEND.
• WMO, World Meteorological Organization.
• ICOLD, International Commission on Large Dams.
• WWF, World Water Council.
• ICID, International Commission on Irrigation and Drainage.
• IAHR, International Association of Hydraulic Engineering and Research.
• UNEP-GLOBAL WASTEWATER INITIATIVE (GW2I).
• OIC Organization for Islamic States.
• OECD Water Governance Initiative.
• WATER JPI.
• Water Cooperation Platform Turkey and the Netherlands.
• EUROPE INBO, Europe International Network of Basin Organization.
• D-8 Organization for Economic Cooperation.
• Water and Green Growth Project.

1.2.5 Other initiatives

Hydrology e-bulletin is published monthly on DSI web-site. Its network includes approximately 1400 members from different water communities of Turkey. The members are composed of water professionals, academicians, decision makers, hydrology experts, practitioners, and governmental staff.

The bulletin is accessible via

1.3 Educational and training courses
1.3.1 Contribution to IHP courses

1.3.2 Organization of specific courses

- SUEN, DSI, MGM has been carrying out training programmes to ministries and water operators mainly from African, Asian and the Middle Eastern countries on water and waste water treatment and technologies. Many water experts has trained from various national and international institutions.
- SUEN provided trainings to the personnel of Azerbaijan’s National Water and Sewerage Administration, Azersu ASC. The courses covered subjects including but not limited to drinking water treatment, supply and quality; collection, treatment and disposal of wastewater; as well as managerial aspects of water and sanitation operators such as customer services and water pricing. 240 personnel from different departments of Azersu ASC were trained and upon successful completion, received their certificates issued by SUEN.
- In collaboration with TIKA, trainings on water and wastewater treatment, technologies and management were given to officials from Ghana (on 28 April-3 May 2014), South Sudan (on 30 June-4 July 2014), Malawi (on 4-20 July) and water and sanitation training were given to Uganda and Malawi (10-5 November 2014). Other trainings are planned to be organized by SUEN in collaboration with TIKA. Another training programme was organized with USAID for the Ministry of Energy and Water of Afghanistan. The Turkish experience and successes in water were shared with the delegations.
- Black Sea Middle East Flash Flood Guidance System Training (29 April - 04 May 2015, Regional Training Center, Ankara-Turkey).
- Southeast Europe Flash Flood Guidance System (SEEFFG Project Coordination and Training Workshop (31 March -2 April 2015, Skopje, Macedonia).
- On The Job Training For Forecasting From Jordan And Lebanon (17-27 May 2016, Ankara, Turkey).
- Short Course on “Drought: Modelling, Forecasting, Combatting & Planning Methodologies” was organized on 23-26 May 2016 in Istanbul by Turkish Water Foundation.
- International Training on Combating Desertification” was held on 30 May – 5 June 2016 in Konya by Ankara Initiative within the scope of UNCCD.

1.3.3 Participation in IHP courses

- UNESCO-IHP “Hydrogeology of Rural Areas” training, 17-30 August 2014, Germany.

1.4 Cooperation with the UNESCO-IHE Institute for Water Education and/or international/regional water centres under the auspices of UNESCO

- UNESCO IHE Institute for Water Education Governing Board :
SUEN President Prof. Ahmet M. Saatci, has been elected as 1st region representative to the UNESCO-IHE Institute for Water Education Governing Board, at IHP's 21st Intergovernmental Council. As well as this position, Dr. Saatçî will be working as a member to UNESCO-IHE Institute for Water Education, in the next three years term. UNESCO-IHE Institute for Water Education bi-annual board meeting was held on 19-20 November 2015, with Prof. Saatçî's attendance, in Delft.

1.5 Publications


1.6 Participation in international scientific meetings

1.6.1 Meetings hosted by the country

- 8th International Shallow Lakes Conference – 12-17 October 2014 – Antalya - Turkey.
- Agricultural Meteorology Commission 16th Session (CAgM-16) – 10-15 April 2014 – Antalya – Turkey.
- Flash Flood Early Warning System Assessment and Urban Flood Training (5-6 February 2015, Ankara, - Turkey.
- A Photography Competition called “Lost Rivers of Ankara” was carried out in 2014 with the aim of creating awareness about the rivers in Ankara, Turkey.
- 4th Hydraulic Structures Symposium was held on 19-21 December 2015 in Antalya by Chamber of Civil Engineers.
- 68th Turkey Geology Convention – 6-10 April 2015 – Ankara – Turkey.
- The “3rd Session of the OIC Conference of Ministers Responsible for Water” - 17-19 May 2016 – Istanbul – Turkey - organized by the Turkish Water Institute (SUEN) under the Ministry of Forestry and Water Affairs of Turkey.
- 3rd National Irrigation Systems Symposium was held on 15-16 October 2015 in Ankara by DSİ.
- 8th National Hydrology Congress – 8-10 October 2015 – Sanlıurfa – Turkey.
- Chamber of Civil Engineers 4th Water Structures Symposium – 19-20 November 2015 – Antalya – Turkey.
- 9th World Congress - Changing World Conditions in Water Resources Management: Challenges and Opportunities was held by European Water Resources association (EWRA), in Istanbul (TURKEY) in 2015.
- 4th Water structures Symposium, 19th- 20th November 2015 by Chamber of Civil Engineers, Turkey.
- The 3rd Session of the Islamic Conference of Ministers Responsible for Water (ICMW) 17-19 May 2016, Istanbul—Turkey.
1.6.2 Participation in meetings abroad

• 7th World Water Forum: SUEN has undertaken the responsibility of thematic coordination of the 7th World Water Forum on behalf of the Ministry of Forestry and Water Affairs of Turkey. SUEN participated in Thematic Process; as the session group co-coordinator of “Sustainable Waste Water Management and Recovery.” and in Science and Technology Process; as the design group member and session group coordinator of “Agricultural Reuse of Wastewater and Irrigation Water Quality: The role of Science and Technology Innovations”. SUEN also conducts a side event named “Introduction to Water JPI: Levelling Water RDI Activities from Regional to Supra-Regional”.


• GW2I: Developing the future agenda for joint actions in the North American and Caribbean Regions & GPA 20th Anniversary High-level International Meeting: Dr. Aslihan Kerc, Project Development and Implementation Coordinator (SUEN), presented the activities of GW2I, potential solutions and approaches on wastewater management, and took part in the wastewater panel organized by UNEP GPA.

• UNEA-2: Towards a Circular Economy through Sustainable Management of Wastewater and Re-use: SUEN and UNEP GW2I partner WECF organized a side event at UNEA-2 focusing on wastewater reuse and best practices. Dr. Aslihan Kerc (SUEN), chair of GW2I held a keynote speech on GW2I practices, and reuse practices in Turkey.

• Hydrology Forum, 24-26 September 2014, WMO, Poland.

• 9th Meeting of the Adaptation Committee (1-3 March 2016, Bonn/Germany).


• Side Event “Providing the Sustainability of Irrigation Facilities After Transfer” – 13 April 2015 – Daegu (SOUTH KOREA - 7th World Water Forum) – Organized by DSI and TUCID


• UNFCCC COP 20 (1-12 December 2014, Lima/Peru).


• Haltas, I., I. Demir, (2014). Toward a Flood Information System (TABIS) for Turkey. 11th International Conference on Hydroinformatics, New York City, NY, USA (oral).


1.7 Other activities at regional level
1.7.1 Institutional relations/cooperation

1.7.2 Completed and ongoing scientific projects

  SUEN takes part in the “Emerging Pollutants in Water and Wastewater” project conducted under UNESCO-IHP International Initiative on Water Quality (IIWQ) that aims to address the urgent need and support of UNESCO Member States to strengthen their scientific, technical and policy capacities to manage human health and environmental risks caused by emerging pollutants in water and wastewater.
- World’s Large Rivers Initiative:
  SUEN participated to the 1st meeting of the open Working Group Meeting of UNESCO-IHP World’s Large Rivers Initiative (WLRI) in June 2016. UNESCO-IHP WLRI aims to study on hydrology, ecology and socioeconomics of over 300 large rivers of the world around a common structure. The 2\textsuperscript{nd} meeting of WLRI will be held on 27-28 June 2016 in Vienna and SUEN is planning to attend this meeting.
- Climate Change Impacts On Water Resources Project
- Yeşilirmak Basin Flood Management Plans
- Antalya Basin Flood Management Plans
- Sakarya Basin Flood Management Plans
- Susurluk Basin Flood Management Plans
- Ceyhan Basin Flood Management Plans
- Capacity Building to Implement the Flood Directive
- Konya and Akarcay Basin Drought Management Plans
- Project on Conversion of the Basin Protection Action Plans into River Basin Management Plans
- Sectorial Water Allocation Plan Preparation Project for Seyhan Basin
- Technical Assistance for Capacity Building on Water Quality Monitoring Project
- Ergene-Meriç Basin Online Water Quality Monitoring Project
- Drinking Water Resources and Treatment Plants Evaluation Project
- Control and Improvement for Reuse of Waters Returning From Irrigation Project
- Investigation of Integrated Management of Table Olive and Olive Oil Facilities’ Waste on Susurluk Pilot Basin
- Project on Determination of Sensitive Areas and Water quality Objectives On The Basis Of Watershed in Turkey
- Project on the Determination of Hazardous Substances in Coastal and Transitional Waters and Ecological Coastal Dynamics
- Capacity Building Support to Turkey on Groundwater Management
- National Water Information System Project
- River Basin Explorer (RBE), a modeling tool for river basin planning in Turkey

2. FUTURE ACTIVITIES

2.1 Activities planned until December 2016

- Steering Committee Meeting Black Sea Middle East Flash Flood Guidance (BSMEFFGS) System, (Tbilisi, Georgia, 28-30 June 2016).
- Urban Floods Flash Flood Early Warning System Initial Meeting.
- On The Job Training For Forecasting for Regional Warning Centers on Turkey (BTUM), September.
- Extensible and Scalable Urban Flash Flood Information Sub-System Initial Meeting.
2.2 Activities foreseen for 2017-2018

- Afghanistan Hydrometeorological and Flash Flood Early Warning System Training.
- 4th International Istanbul Water Forum will be held in Istanbul in 2017.
  http://www.ulusaltaskinsempozyumu.net/Default.aspx
- 9th National Hydrology Congress will be held in Diyarbakır (TURKEY) in 2017.
- 10th International Clean Energy Symposium will be held between 24-26 October 2016, Istanbul by Turkish Water Foundation and İTÜ.

2.3 Activities envisaged in the long term