



**TRAINING on “Sustainable Management of Irrigation Water Resources at the Scale of the River Basin”**  
of the project

**Small-scale, low-cost, environment friendly irrigation schemes: sites selection and preparation  
of full work tender dossier**

**24 September 2019 (Tuesday)**

**Queen’s Hotel, Vasil Gjorgov 16 Zebra Center, Skopje 1000**

Start	Finish	Subject	Speaker
09:45	10:00	Registration	
10:00	10:30	<b>Introduction – Recap on IWRM and Key Definitions</b> <i>the renewable resource - abstraction – supply – use – consumption – loss - return</i>	Consultant: Brian Faulkner
10:30	11:45	<b>What is the Annual Renewable Resource of the river basin?</b> <i>- Hands-on exercise with hydrological data</i> <i>- Differences between flow mean and Q50</i> <i>- Hands-on exercise with Flow Duration Curves</i> <i>- Deriving the Standard Year for water resource allocation</i>	Consultant: Brian Faulkner
11:45	12:15	<b>What is ‘environmental flow’ and why does it matter?</b> <i>- Impacts of abstraction on environmental flow</i> <i>- Environmental flow and ecological status</i> <i>- Environmental flow definition and relevance, including new Macedonia methodology</i>	Consultant: Daniela Buzharovska
12:15	12:45	<b>Concept of “Water Available for Use”</b> <i>- Hands-on exercise with Environmental Flow Curves</i> <i>- Determination of ‘Water Available for Use’</i>	Consultant: Brian Faulkner
12:45	13:00	Questions/discussion	Attendants
13:00	14:00	Lunch break	
14:00	14:15	<b>Video presentation</b> <i>- “How Rivers Work: The Role of Groundwater”</i>	Consultant: Daniela Buzharovska
14:15	15:30	<b>Groundwater Dynamics and Sustainable GW Abstraction</b> <i>- Interconnections between surface and groundwater</i> <i>- Concepts of annual recharge and discharge and static level</i> <i>- Critical importance of groundwater discharge to environmental flow</i>	Consultant: Brian Faulkner
15:30	15:45	<b>Coffee break</b>	Consultant: Brian Faulkner



15:45	16:15	<b>What is the annual renewable resource of groundwater?</b> <i>- Hands-on exercise with Baseflow Index and annual recharge</i>	Consultant: Brian Faulkner
16:15	16:45	<b>Case Study of Groundwater Abstraction – Crna Reka</b> <i>- Assessment of sustainable irrigation abstraction</i> <i>- Using the RIBAMAN-5 Model for groundwater abstraction impacts</i> <i>- Using the RIBAMAN-5 Model for IWRM assessment</i>	Consultant: Brian Faulkner
16:45	17:00	Discussion – Questions – Close Out	Consultant: Brian Faulkner