

OPTIMIZING WATERSHED MANAGEMENT BY COORDINATED OPERATION

OF STORING FACILITIES by D. Anghileri, A. Castelletti, F. Pianosi, R. Soncini-Sessa and E. Weber

Dipartimento di Elettronica Informazione e Bioingegneria, Politecnico di Milano, Italy

MOTIVATION AND OBJECTIVES

Water storing facilities in a watershed are very often operated independently one to another to meet specific operating objectives, with no information sharing among the operators. This uncoordinated approach might result in upstream-downstream disputes and conflicts among different water users, or inefficiencies in the watershed management, when looked at from the viewpoint of an ideal central decision-maker. In this work, we aim at:

 \rightarrow quantifying the loss in performance due to uncoordinate management

 \rightarrow designing coordination mechanisms to improve the system management and reduce conflicts

