



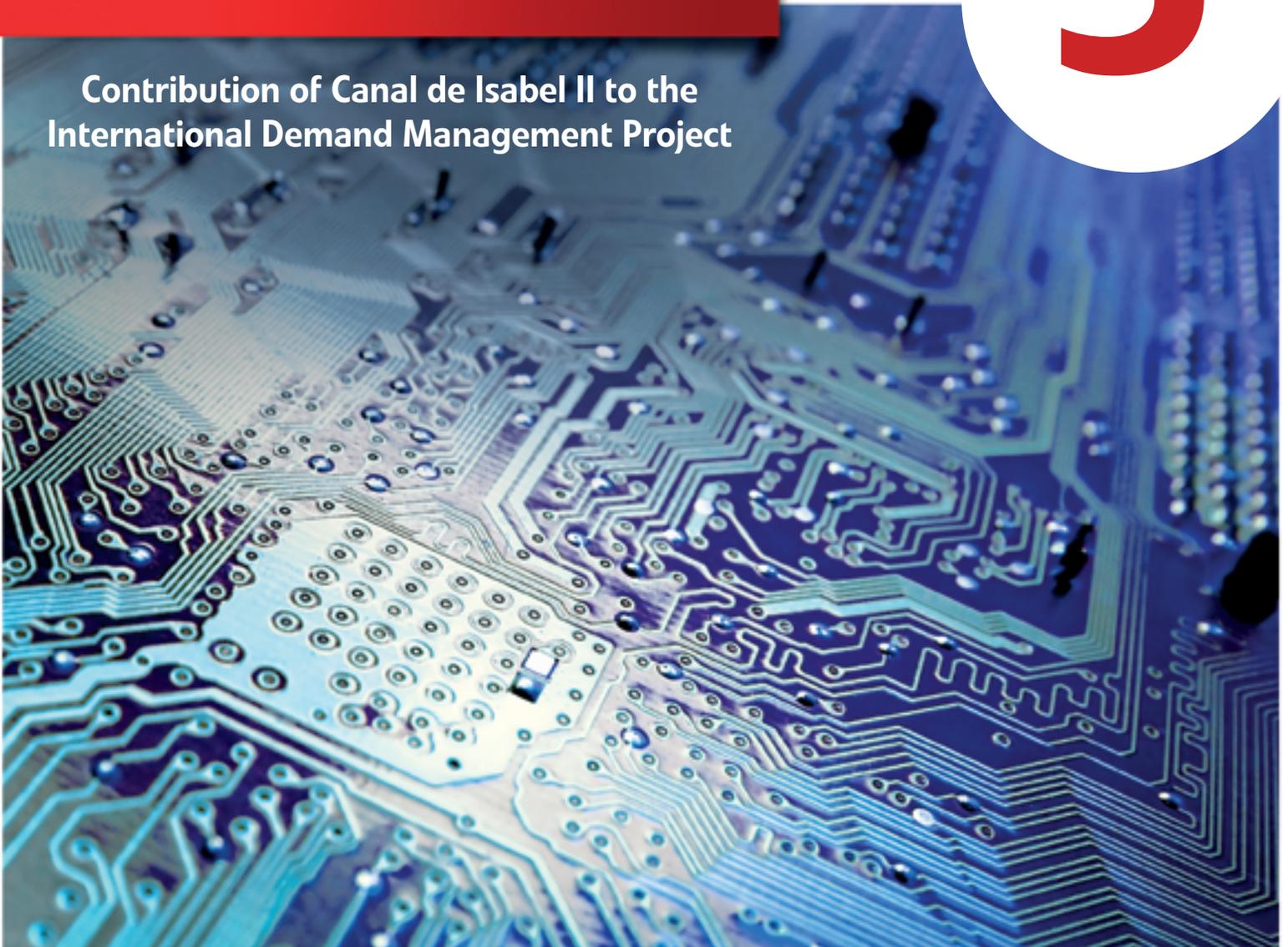
Canal de Isabel II

BOOKLETS

RESEARCH + DEVELOPMENT & INNOVATION

Contribution of Canal de Isabel II to the International Demand Management Project

3





BOOKLETS
Research + Development & Innovation

3

Contribution of Canal de Isabel II to the
International Demand Management Project

© Canal de Isabel II - 2009

Authors: Andrea Turner, Juliet Willetts y Stuart White
Project Direction: Francisco Cubillo
Edition coordinated by: Subdirección de Comunicación y RR.PP.

ISBN: 978-84-933694-7-7



PRESENTATION



Canal de Isabel II's Research, Development & Innovation Booklets form part of the company's Knowledge Management Strategy and of the development involved in the Investigation, Development and Innovation Plan.

These Booklets represent an element for diffusion of projects and initiatives that are developed and sponsored by Canal de Isabel II for innovation in those areas related with water service in the urban environment.

A series of different problems that have been undertaken in each project are put forward in the Booklets, along with the results that have been obtained. The intention behind their diffusion by means of these publications is to share the experiences and knowledge that have been acquired with the entire water services sector, with the scientific community and with all those working on research and innovation. What is intended with the publication of these Booklets is to contribute to the improvement and efficiency in water management and, consequently, in the quality of service provided to citizens.

Apart from its publication in printed format, the booklets will also be available on Canal de Isabel II's web site, into the Publications section.



CONTEXT OF THE PROJECT



The objective of the collaboration of Canal de Isabel II in the International Demand Management Project (well-known by its acronym IDMF) is to contribute to the methodologic development and the definition of a new framework or international model to incorporate the techniques of Demand Management in the Integrated Planning of Resources and Supplying. Canal de Isabel II considers of special importance forming partnership in the group that leads the world-wide investigation in this field and the obtained methodologic results.

IDMF is contemplated as an International Project developed under the auspice of the Specialists Group EOM (Operation & Efficient Management S.G.) of the IWA (International Water Association), in order to define a framework or fulfillment rules of efficiency in the management of the demand and its incorporation to the planning and integrated management of resources. Several stages or phases have been designed, of which, this document, explains the results of first of them. This research was articulated by means of an agreement of mutual collaboration between Canal de Isabel II and the Institute for Sustainable Futures, (University of Technology of Sydney).

TECHNICAL INVENTORY

Title of the Project	International Project of Efficiency in the Management - IDMF
Line of Research	Assurance of availability / demand balance.
Units of Canal de Isabel II involved	Deputy Direction of Research, Development & Innovation.
External Partnership	Institute for Sustainable Futures, UTS -University of Technology of Sydney (Australia).
Object and Justification of the Project	The objective of the project is to contribute to the establishment and definition of a new framework or international model to incorporate Demand Management like a tool for the Integrated Planning of Resources and the Supplying.
Contribution to the State of the Art	It proposes a new model for planning integrated of management options of demand and practices of efficiency.
Summary & relevant milestones of the project	<p>The IDMF project has been intended as a way to afford the valuation and integration of the ultimate techniques in Management of Demand into the Integrated Planning of Resources & Supplying developed within the EOM SG (Efficient Operation & Management Special Group) integrated in the IWA (International Water Association).</p> <p>The exposition contemplates a methodologic definition and criteria of "Good Practices" as well as a commented compilation of the most important bibliography of the area.</p>
Summary of obtained results and outcomes	<p>The outcomes displayed here define the specific methodology, the criteria and the terminology. In addition, it gives a comprehensive commented Bibliographical compilation of the more excellent recognized literature of Management of Demand and Integrated Planning of Resources.</p> <p>The phases following of this project contemplate to check this methodology at different levels of application and contexts of development.</p>
Opened Lines of Research for the continuation of the project	The model states new routes for the development of innovative integrated methods of Global Planning of Resources & Services of Water.

EXECUTIVE SUMMARY

This report presents the outcomes of Stage 1 of the International Demand Management Framework (IDMF), an initiative set up under the auspices of the International Water Association's (IWA) Specialist Group "Efficient Operation and Management" - Task Force No. 7.

The objectives of the overall IDMF study are to develop a step-by-step framework and associated manual on best practice approaches to urban water supply-demand planning with a focus on demand management/ water efficiency.

The objectives of Stage 1 have been to gather and represent the core international literature in this field, to develop an outline and criteria that describe a best practice approach, and utilise these to benchmark the activities of a case study utility, Canal de Isabel II, the Madrid water utility. The work has been primarily conducted by the Institute for Sustainable Futures, with review and input from an international working group of experts in this field.

A large range of published and unpublished literature has been selected and reviewed, extracting elements that inform current best practice. This information has then subsequently been ordered into a systematised annotated bibliography which presents the literature under key topics for easy reference and use. A preliminary literature review has been prepared and is included in this report which synthesises the literature on water demand management and relevant parts of the field of integrated resources planning, the foundation of the emerging best practice approach advocated by this study.

The literature review demonstrates that recent ideas about water planning and management involve thinking of demand and supply in parallel, and bringing them together to assess the difference between supply and demand (the supply-demand balance) and designing and comparing potential options to find the most appropriate way to maintain a balance between supply and demand. The literature review also demonstrates a growing wealth of knowledge in end use measurement and analysis, as data collection methods are refined and utilities become familiar with detailed demand forecasting. While debate continues regarding the best approach of comparison of supply and demand options, there is widespread consensus that unit cost (average incremental cost) provides a robust comparison over time and between options of varying scales. Also, that qualitative assessment and participatory approaches are required to enable other sustainability criteria to be considered as a part of the decision-making process. Finally, evaluation is gaining increased importance as practitioners come to realise that demand management programs must be closely monitored to determine actual outcomes and learn about what works in the local context.

The best practice process outline and criteria have been developed based on the foundation provided by the international literature and the experience of key staff of the Institute for Sustainable Futures through a series of internal workshops. These criteria themselves are broadly applicable and concise. They have been elaborated at two levels of depth depending on their applicability to strategic, high-level planning, or detailed planning. The best practice process outline and criteria have been assessed by the working group members of the IWA Task Force No.7, broad spectrum of experts and practitioners in the fields of demand management and urban water planning from both developed and developing countries. The comments of the working group members have been incorporated into the final version of the process outline and criteria.

The best practice criteria have been used to benchmark a case study utility, Canal de Isabel II (CYII) of Madrid, on their demand management and planning activities. The criteria have proved useful for this purpose in two ways. Firstly, they have allowed a broad overview of CYII's work to be gained through mapping of their actions against the different steps in the IDMF process. From this, the areas in which significant effort had been invested were made evident, as were the areas not currently attempted and yet requiring attention. Secondly, at a detailed level, the criteria could be used to guide improvement of CYII's activities, such as how to increase the reliability in end use data collection.

Stage 1 of the IDMF project has therefore taken important steps forward in defining an internationally recognised and respected approach in the complex area of demand management and integrated resources planning. The next steps will be to conduct a more detailed literature review, and to use and refine the framework in diverse locations including developing and emerging economies.

www.canalgestion.es/galeria_ficheros/compromiso-social/publicaciones/Cuaderno3_I+D+i.pdf

Canal de   Isabel II