Side Event at the 7th World Water Forum
Solution for water challenges of non-urban area
with simple and low-cost technologies
(SE0089)
11:20 - 13:20, 15 April 2015, Daegu

Key note speech on Water-related challenges of non-urban area and possible solution with simple and low cost technologies

Japan Water Forum

Definition of non-urban area

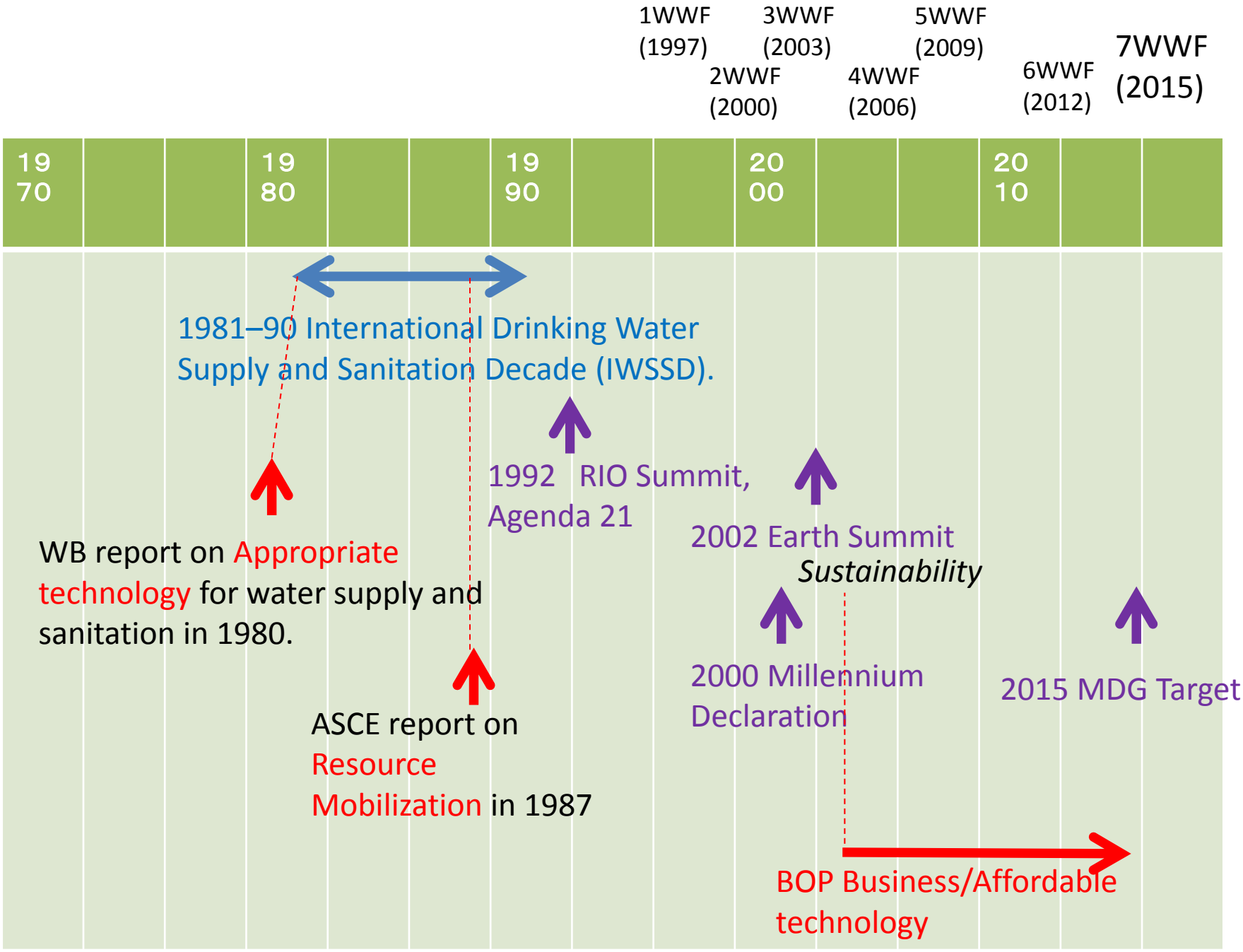
- non-urban area : Literally non-urban becomes the meaning of the area except the city namely the farm village (rural) as a meaning, but not only rural area but also the neighboring areas (peri-urban) of the city shall be included in this case.

Definition of simple and low-cost technologies

- simple and low-cost technologies : Technologies, which can provide inhabitants at affordable price in developing countries and with easy technique of the maintenance.

Condition of urban-rural gaps

- JMP report 2014 estimated that 673 million in rural areas (over 90% of 748 million in the world) still lack access to an improved drinking water source, although the decrease in urban–rural disparity gap in access has been reported since 1990 in 87 of the 116 countries included in the analysis.
- Rural (non-urban) has often been left behind from the development with large-scale investments and sophisticated technologies.


1WWF (1997)
2WWF (2000)
3WWF (2003)
4WWF (2006)
5WWF (2009)
6WWF (2012)
7WWF (2015)
19 70
19 80
19 90
20 00
20 10
1981–90 International Drinking Water Supply and Sanitation Decade (IWSSD).
1992 RIO Summit, Agenda 21
2002 Earth Summit
Sustainability
2000 Millennium Declaration
2015 MDG Target
WB report on Appropriate technology for water supply and sanitation in 1980.
ASCE report on Resource Mobilization in 1987
BOP Business/Affordable technology

Appropriate technology

- The World Bank published a report titled, “Appropriate technology for water supply and sanitation” in 1980.
- The report suggests an approach that can be used by planners to integrate social and cultural factors into project design to ensure the introduction of water supply and excreta disposal technologies that will be accepted, properly used, and maintained.
- Inappropriate technologies are expensive and high-grade systems, which are too complicated and costly to be maintained at the local level in cooperation with the users. In many cases, community was not involved in the choice of systems.

Resource mobilization

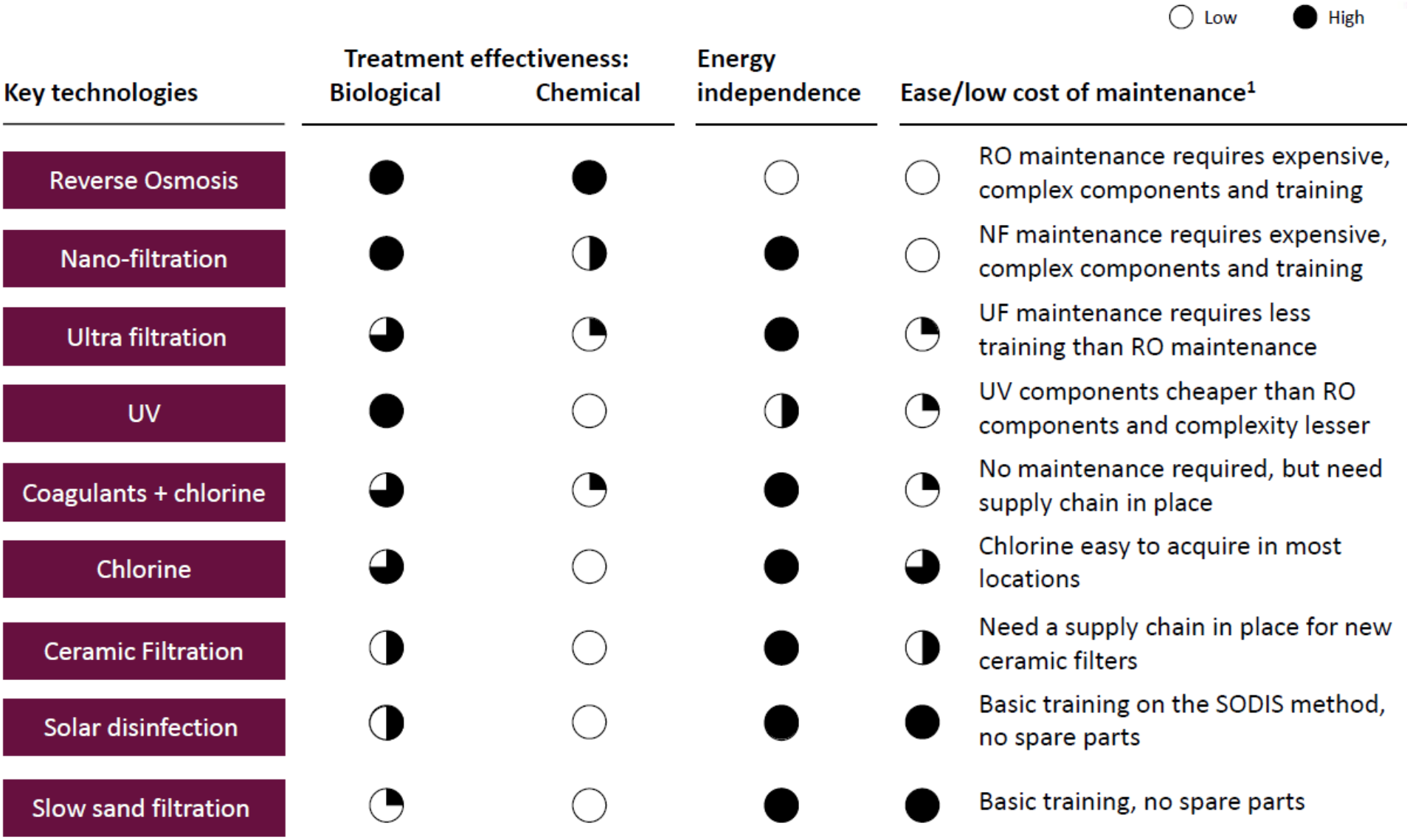
- “Resource Mobilization for Drinking Water and Sanitation in Developing Nations” was published by ASCE in 1987, compiling the result of ASCE International Conference about the same.
- Major components addressed included (1)human resources development, (2)community education, (3)training of managers, technicians and professional engineers.

BOP Business/Affordable technology

- In order to appeal to the BoP demographic, companies must design products and services that are useful (e.g. life-saving technologies like water filters, mosquito nets etc.) and affordable (appropriate cost structure).
- It is ethical to sell to the poor provided that basic requirements of usefulness and affordability are met. At the end of the day, value creation for the BoP consumers is paramount.

http://www.uniteforsight.org/social-entrepreneurship-course/module9

A comparison of water treatment technologies



Source: Sasakawa, Dalberg 2013

Life-cycle cost reduction Challenges

- As for appropriate facility development, a lower initial investment for construction of facility and/or installation of equipment/ systems can not be always an appropriate investment. The valuable invested physical assets have to last for long term usage and operation in the Water Sector.
- To obtain one of the solutions for long, sustainable management of water supply system, not only a lower initial cost but also total Life Cycle Cost(LCC) for facility development should be considered, when investment plan is scheduled.

Sugawara (JICA), 2015

RBL encourages DMC to improve effectiveness and efficiency

- Results-Based Lending (RBL) of ADB provides an added tool to better meet the needs of developing member countries (DMC) and improve development effectiveness.
- The objectives are to increase accountability and incentives to deliver and sustain results, improve the effectiveness and efficiency of government-owned sector programs, promote institutional development, and enhance development effectiveness.
- What distinguishes Results-Based Lending from other ADB modalities is that disbursements of loan proceeds are directly linked to achievements of program results.
- There will be no prior country or sector restrictions on RBL applications.

http://www.adb.org/site/public-sector-financing/results-based-lending-programs

Promising approaches will be presented, including:

- Biosand filter for household drinking water treatment
- Upward Biological Contact Filtration for Advanced Water Treatment System
- Solution for waste-water treatment with Bio Mesh
- Excrement Disposal by Eco-sanitation
- Improving Sustainable Water and Sanitation Systems in Sahel Region in Africa: case of Burkina Faso