Support of integrated water resources management in the Medjerda River Basin in Northern Africa

The Medjerda River, which flows through the northern part of Tunisia to the Mediterranean Sea, has a catchment area of 23,700km^2. It has a population of 2,100,000 within its basin. Although water resources development/management plans have been prepared and implemented, the focus was on the development and use of water resources rather than flood control.

Under these circumstances, a large-scale flood occurred in the Medjerda River Basin in 2003. The lower plain area was flooded for a month, and crops, houses, and properties were damaged. The resultant obstruction of traffic also caused severe socio-economic damage.

To address drought and flood problems, JICA has been conducting the "Study on Integrated Water Management Plans in the Medjerda River Basin" since November 2006. The following are some of the features of the study:

●Consideration of various aspects of water

The study takes into account various aspects, such as water/land resources, quantity/quality of water, and surface water/groundwater.

●Establishment of a collaboration mechanism between various water related organizations

Flood control in rivers, water use (water supply and sewerage systems, agricultural water and industrial water use) and environmental conservation (water for maintaining ecosystems) have been managed by different organizations such as the Ministry of Agriculture and Water, Ministry of Environment and Sustainable Development and Ministry of Equipment, Housing and Territory Development. A forum was created to discuss and implement comprehensive measures.

●Participation of all stakeholders

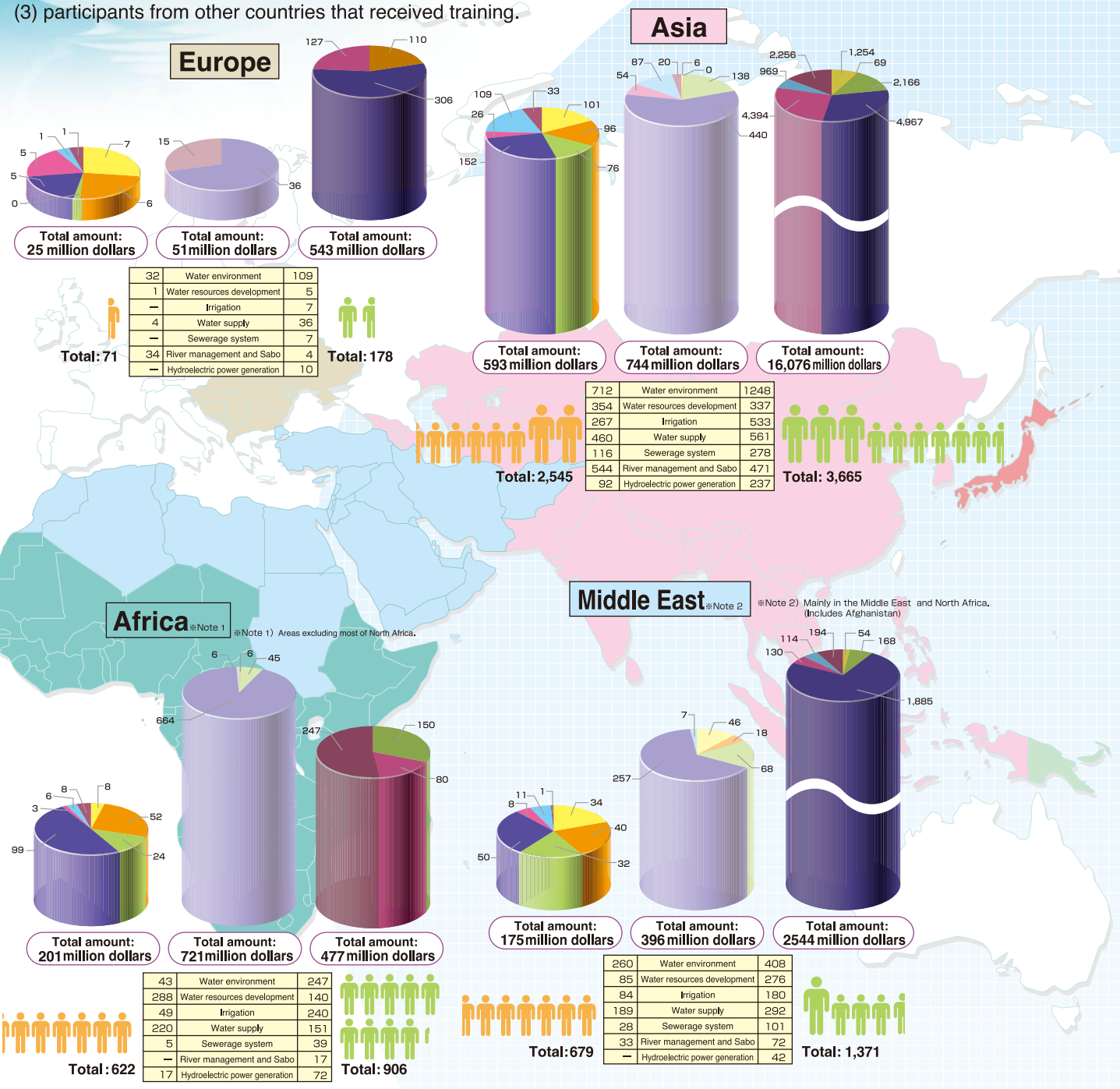
JICA intends to promote the participation of all stakeholders including the central and local governments, the private sector, NGOs, and local residents. The aim is to maximize the benefits of water fairly by managing water comprehensively without compromising the sustainability of ecosystems.

The discussed items regarding infrastructure includes the development of reservoirs and flood control basins as well as the improvement of river channels. A survey of the residents was also conducted to find out the tolerable limits of flood and crop damage, with the aim of preventing excessive expenditures on infrastructure and minimizing environmental loads. Preservation of historic buildings was also taken into account.

The main focus of the study is flood control, but given that water is a valuable resource, the study also pursues ideas to make the most of the water stored during a flood.

JICA's Assistance to Water Issues Worldwide (FY2001-2010)

Shown here are the cumulative totals of (1) expenditures on water-related projects (JICA's investments for technical assistance, Japan's grant aid projects facilitated by JICA and yen loans), (2) number of JICA experts dispatched and (3) participants from other countries that received training.



JICA's Expenditures

(1) Expenditures on technical assistance

JICA invested 1,182 million dollars worldwide for technical assistance in the water sector. A total of 593 million dollars was invested in Asia, accounting for 50% of the total investment, followed by 201 million dollars (17%) in Africa, 175 million dollars (15%) in the Middle East and 164 million dollars (14%) in Central and South America.

In terms of sub-sector expenditures, 363 million dollars (31%) were invested in the water supply sub-sector, 217 million dollars (18%) in the water resources development sub-sector and 206 million dollars (17%) in the water environment sub-sector.

(2) Expenditures on grant aid projects

JICA facilitated the implementation of Japan's grant aid projects, whose total amount was 2,207 million dollars. The largest investment was in Asia, totaling 744 million dollars (34%), followed by 721 million dollars (33%) in Africa and 396 million dollars (18%) in the Middle East.

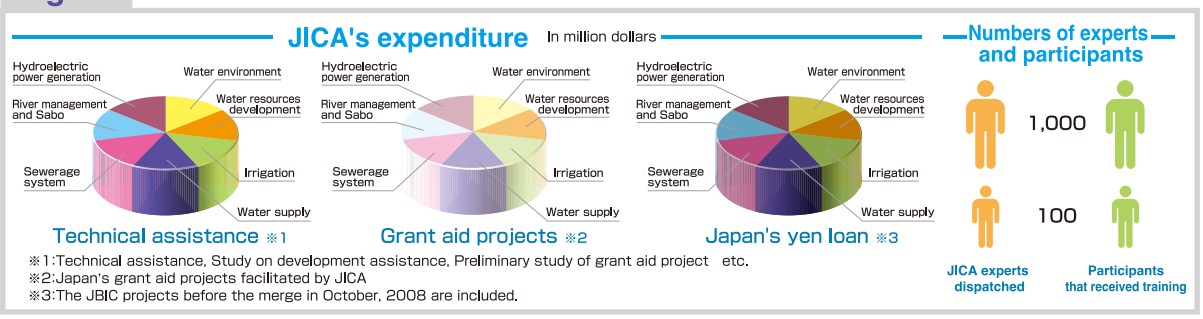
In terms of sub-sector expenditures, significant amount of the investment, 1,667 million dollars (76%), went to the water supply sub-sector, followed by the irrigation sub-sector, 259 million dollars (12%).

(3) Expenditures on yen loans

JICA invested 21,719 million dollars worldwide for yen loans in the water sector. The largest investment was in Asia, totaling 16,076 million dollars (74%), followed by 2,544 million dollars (12%) in the Middle East and 1,697 million dollars (9%) in Central and South America.

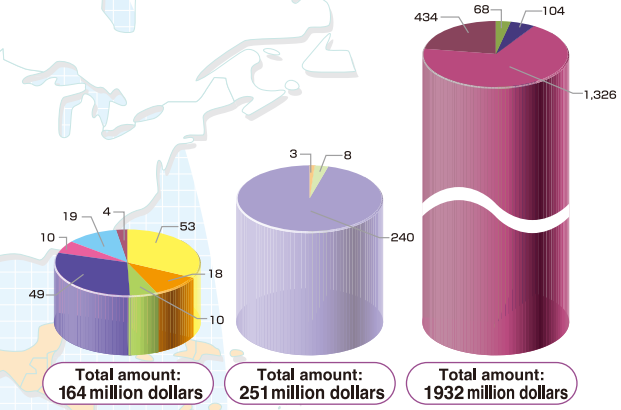
In terms of sub-sector expenditures, a significant amount of the investment, 7,263 million dollars (33%), went to the water supply sub-sector, followed by the sewerage system sub-sector, 6,151million dollars (28%), and the hydroelectric power generation sub-sector, 3,183 million dollars (15%).

Legend



※1:Technical assistance, Study on development assistance, Preliminary study of grant aid project etc.
※2:Japan's grant aid projects facilitated by JICA
※3:The JBIC projects before the merge in October, 2008 are included.

Central and South America

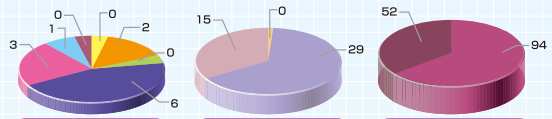


Total amount: 164 million dollars | Total amount: 251 million dollars | Total amount: 1932 million dollars

270	Water environment	552
40	Water resources development	42
29	Irrigation	44
209	Water supply	281
50	Sewerage system	134
60	River management and Sabo	39
–	Hydroelectric power generation	37

Total:658 | Total: 1129

Pacific Region



Total amount: 13 million dollars | Total amount: 44 million dollars | Total amount: 146 million dollars

3	Water environment	61
–	Water resources development	8
–	Irrigation	10
9	Water supply	37
–	Sewerage system	12
9	River management and Sabo	–
1	Hydroelectric power generation	23

Total:22 | Total:151

※The area classifications mentioned above are based on the classifications of the newly merged JICA.

■Experts Dispatched

JICA dispatched 4,597 experts to other countries, of which 2,545 were assigned to Asia (55%), 679 to the Middle East (15%), 658 to the Central and South America (14%).

1,320 experts (29%) were assigned to the water environment sub-sector. 1,091 experts (24%) were assigned to the water supply sub-sector, 768 experts (17%) to the water resources development sub-sector and 680 experts (15%) to the river management and Sabo sub-sector.

■Participants Trained

7,400 participants from other countries received training, 3,665 (50%) from Asia, 1,371 (19%) from Central and South America and 1,129 (15%) from the Middle East.

2,625 participants received training in the water environment sub-sector, accounting for 35%, 1,358 participants (18%) in the water supply sub-sector and 1,014 participants (14%) in the irrigation sub-sector.

Notes : As amounts and percentages are rounded off, they may not match their total.
Expenditures in dollars are calculated by converting the yen amount at the exchange rate of US$ = 87.8 yen as designated by DAC for 2010

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