

IV 添付資料

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 - (3) 電力・水利工科大学 (回答)
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 - (2) エネルギー省
 - (3) エネルギー省 Water Affairs
 - (4) テヘラン地区水利局
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MINUTES OF MEETING FOR
TRAINING NEEDS FINDING STUDY ON
THE COUNTRY-FOCUSED GROUP TRAINING COURSE
“URBAN WATER SHORTAGE MANAGEMENT FOR IRAN”

Tehran, 6 August 2002

In response to the request of the Government of the Islamic Republic of Iran (the Ministry of Energy), the Government of Japan has decided to conduct the training needs finding study for the country-focused group training course, “Urban Water Shortage Management for Iran” (hereinafter referred to as “the course”) through the Japan International Cooperation Agency (hereinafter referred to as “JICA”).

The Training Needs Finding Study Team of JICA (hereinafter referred to as “the Team”), headed by Mr. Toshio ISHIGAMI, visited the Deputy Minister for Urban Water and Wastewater Affairs, the Iranian National Water & Wastewater Engineering Company, the Tehran Province Water & Wastewater Company and the Power & Water Institute of Technology, carried out field surveys, and had series of meetings with said authorities from 30 July through 6 August 2002. Both sides agreed the basics of the course attached hereto.

Mr. Sattar Mahmoudi
Chairman of Board of Directors and
Managing Director,
The Tehran Province
Water & Wastewater Company

石上 俊雄

Mr. Toshio ISHIGAMI
Team Leader,
Training Needs Finding Team
Japan International Cooperation Agency

Mr. M. Nazaripour
Deputy of Operational Supervision,
The Iranian National Water & Wastewater
Engineering Company

Dr. Nemat Hassani
Assistant Professor,
Head of Water Engineering Department,
The Power & Water Institute of Technology

The Basics of the Course

(1) Title of Training Course

Urban Water Shortage Management for Iran

(2) Course Objectives

Participants are expected to acquire:

- (a) the knowledge and technology about water shortage management
- (b) the knowledge to manage water resource and water works facilities effectively against water shortage
- (c) the ability for planning/designing measures to solve water shortage problems
- (d) the methods to promote public awareness in water conservation

(3) Training Period (tentative)

1st year: 7 January 2003 ~ 8 February 2003 (33 Days)

2nd and 3rd year: from the beginning of January to the beginning of February (approximately 1 month)

(4) Number of Participants

10 participants per year (upper limit)

The Iranian side requested to increase the number of participants from 10 to 12. The Team agreed to study the possibility of increase after 1st year implementation.

(5) Target Group

Managers, engineers and faculty members of urban water supply and water resources management for national / regional levels who are engaged in mitigation of urban water shortage problems.

(6) Requirements for Applicants

Applicants should be:

- (a) nominated by the Iranian government in accordance with the official procedure,
- (b) currently engaged in water resource management or water supply with more than 5 years' experience in these fields,
- (c) engaged in planning / implementing measures and training against water shortage problems,

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- (d) university graduates or equivalent,
- (e) good working knowledge of English,
- (f) under 50 years of age,
- (g) in good health both physically and mentally fit for the training, and
- (h) non-military personnel.

(7) Training Subjects (tentative)

The Team presented to Iranian side the tentative training subjects attached hereto as Annex I. The Iranian side accepted the subjects in principle and requested to add the following items to the training subjects:

- (a) Anti-earthquake measures in water supply: risk management, damage control and emergency supply
- (b) Water quality control at drought period
- (c) Groundwater management at drought period
- (d) Water works Instrumentation (tele-control and program logic control)

The Team agreed to study the possibility of inclusion of the four subjects mentioned above.

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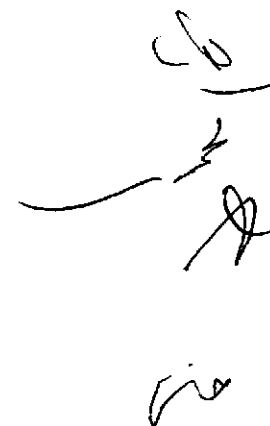
Urban Water Shortage Management for Iran Training Subjects (tentative)

1 Outline of Water Resources in Japan

- 1.1 Rainfall characteristics in Japan, Iran and other countries
- 1.2 Water resources in Japan
- 1.3 Administration of water resources development and related laws

2 Water Shortage Management in Long-Term Planning

- 2.1 Water resource development in Japan
- 2.2 Monitoring and information use for water resource management
 - (a) Hydrological monitoring
 - (b) Utilization of precipitation and river flow information
- 2.3 Water works undertaking
 - (a) Water works administration and water works laws (including water tariff and water works management)
 - (b) UFW (unaccounted-for water) control
 - (c) Zoning for water distribution
 - (d) Water supply operation system
 - (e) Water conservation in a municipality (including information activities for water saving and development / promotion of low-flow plumbing device)
- 2.4 Other activities
 - (a) Reclaimed water utilization system
 - (b) Rainwater collection facilities
 - (c) Recycle system of industrial water



3 Emergency Activities at Drought Periods

3.1 Activities in water resource management

- (a) Regulations and approaches
- (b) Sector coordination for rationing water resources (domestic / industrial / irrigation water)
- (c) Reservoir management

3.2 Water works activities

- (a) Public information and education strategy
- (b) Rationing water supply

4 Site Visits

5 Presentation & Discussion

5.1 Presentation of kick-off papers

At the beginning of the course, participants will be requested to present their kick-off papers summarizing their concerns on current situations and problems of water resource management / water supply in Tehran or other cities / regions.

5.2 Presentation of and discussion on final reports

During the training period, participants will prepare final reports to suggest some ideas to improve current situations in Tehran or other cities / regions.

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LIST OF ATTENDANTS

(Iranian Side)

The Ministry of Energy

Mr. Abbas Shafiei	Deputy Minister for Urban Water and Wastewater Affairs, and Managing Director, NWWEC
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The Iranian National Water & Wastewater Engineering Company (NWWEC)

Mr. M. Nazaripour	Deputy of Operational Supervision
-------------------	-----------------------------------

The Tehran Province Water & Wastewater Company

Mr. Sattar Mahmoudi	Chairman of Board of Directors & Managing Director
Mr. Abbas Haj-Hariri	Deputy Managing Director for Operation Supervisory Affairs
Mr. Ali Ghassemi	Deputy Managing Director for the Greater Tehran Water Supply
Mr. Reza Majidi-Nasab	Advisor to Managing Director
Mr. Ali Taghavi	Manager of Technical Office
Mr. Oskoee	Advisor to Managing Director

The Power & Water Institute of Technology

Dr. Nemat Hassani	Assistant Professor, Head of Water Engineering Department
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(Japanese Side)

The Embassy of Japan

Mr. Kunihiro MORIYASU	Second Secretary
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The Japan International Cooperation Agency

Mr. Izumi TANAKA	ODA Advisor
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The Training Needs Finding Team of JICA

Mr. Toshio ISHIGAMI	Team Leader
Mr. Yoshiki OMURA	Technical Advisor (Water Supply)
Mr. Kazumi SASAKI	Technical Advisor (Water Resource Management)
Mr. Kotaro NISHIGATA	Planning of Training Course

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**Questionnaire on the JICA country focused group training course:
"Water Shortage Management in the Urban Area"**

To whom it may concern,

We will greatly appreciate your cooperation in answering the following questions regarding the your efforts for Water Management and Drought Conciliation. This questionnaire is to be completed by the supervisor or department head. Please kindly write in block letters or type and submit it when we visit your organization. The answers are utilized for planning the JICA country focused group training course, "Water Shortage Management in the Urban Area ".

I. General questions

1. Full name of the organization: _____

2. Your name and position:(name) _____

(position) _____

3. Office address and telephone/fax number: _____

4. Please attach your organization chart.

5. Please attach the document on organization profile if you have one (in English).

II. Roles of your organization for Water Management

Please describe the roles of your organization for Water Management.

III. Roles of your organization during drought

1. Please describe the roles of your organization during drought.

2. Please describe the activities of your organization for the drought of 2001.

3. Please attach the report on the drought of 2001 if you have (in English).

IV. Activities of your organization for drought mitigation (at normal time)

1. Please describe the activities of your organization for drought mitigation.

2. How much was the budget scale for the activities of drought mitigation (latest fiscal year)?

(_____)Rls

*If you have the breakdown, please attach the list or something.

V. Expectation for the training course

1. What kind of technologies are required for drought mitigation in your country?

2. What do you expect for the training course?

VI. Others

If you have any suggestions or/and requests for this training course, please describe here.

Thank you very much for your kind cooperation.

**Questionnaire on JICA country focused group training course:
"Water Shortage Management in the Urban Area"**

To whom it may concern,

We will greatly appreciate your cooperation in answering the following questions regarding the Water Management and Drought Conciliation of your country. Please kindly write in block letters or type and submit it when we visit your university. The answers are utilized for planning the JICA country focused group training course, "Water Shortage Management in the Urban Area".

I. General questions

1. Full name of the organization: _____
2. Your name and position:(name) _____
(position) _____
3. Office address and telephone/fax number: _____

4. Please attach the curriculum or something like that for students in your university (in English).

II. Activities for Water Management and Drought Mitigation in Iran

1. Please describe the main activities for Water Management and Drought Mitigation of your country.

2. If Iran has pending issues on drought mitigation, please describe them.

III. Plans and Perspective in the field of Water Management and Drought Mitigation.

1. Please describe the future prospects of water consumption and water resources.

2. Please describe the plans and the future prospects of water management and drought mitigation.

IV. Expectation for the training course

1. What kind of technologies are required for drought mitigation in your country?

2. What do you expect for this training course?

VI. Others

If you have any suggestions or/and requests for this training course, please describe here.

Thank you very much for your kind cooperation.

Questionnaire on the JICA Country focused group training Course:

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We will greatly appreciate your cooperation in answering the following questions regarding the your efforts for Water Management and Drought Conciliation. This questionnaire is to be completed by the supervisor or department head. Please kindly write in block letters or type and submit it when we visit your organization . The answers are utilized for planning the JICA country focused group training course , Water Shortage Management in the Urban Area.

I . General questions

1. Full name of the organization Tehran Water and Wastewater Company.
2. Your name and position : (name) Sayed Ali Taghavi
(position) : manager of Technical Office.
3. Office address and telephone/fax number : Tehran - Fatemee AVE.
Hejab AVE . 8964560
4. Please attach your organization chart. It is Reflected in the TWWC catalog
5. Please attach the document on organization profile if you have on (in English). It is Reflected in the TWWC catalog.

II. Roles of your organization for Water Management

Please describe roles of your organization for water Management.

1. Supply and distribution of drinking water for all cities within the boundary of province of Tehran.
2. Operation and maintenance of all water supply and distribution equipment and buildings.
3. Transfer of water from resources to customers.
4. Acceptance of new subscribers and offering after connection services

III. Roles of your organization during drought

1. Please describe the roles of your organization during drought.
 - organization crisis Management meetings and participation in its various SUB committes .
 - Planning and executing water rationing program .
 - Consumption control advertising .
 - Increrasing the extration of under groud water and reduction of. Distribution network pressure.

2. Please describe the activities of your organization for the drought of 2001.
 - Concentration on leakage prevention progras.
 - Concentration of network pressure via pressure reducing valves.
 - Bringing water to Tehran from Taleghan .
 - Incrasing extration of water from underground Sourcer from 250 mm³/year to 400 mm³/year .
 - Using Qhanats .
 - Heavy advertising and asking people to use water saving techniques .
 - Installing water reduction equipments . water rationing (1 section of city of Tehran each day)
 - Sending warning notice to high consumption subscribers
 - Executing a new price table for crisis period , the more the use , the higher , the price
 - Expediting network repair

3. Please attach the report on the drought of 2001 if you have (in English)

IV. Activities of your organization for drought mitigation (at normal time)

1. Please describe the activities of your organization for drought mitigation.
 - water reduction equipments to be installed in all public . places and encouraging regular household to do the Same .
 - Excavation of new water wells .
 - Seperation of the water which is bening used for parks and greenaty from drinking water network .

- Installation of new pressure reducing valves in areas which pressure inside the network is high .
- Re evaluating the water network again .

- Advertising .
- Separating the water network under each reservoir from rest of the network .
- Control of incoming and outgoing water from each reservoir .
- Reduction of repair Time .
- Reduction of responding to a repair call .

2. How much was the budget scale for the activities of drought mitigation (latest fiscal year)?

(-----) Rls

* If you have the break down , please attach the list or something.

V. Expectation for the training course

1. What kind of technologies are required for drought mitigation in your country?

2. What do you expect for the training course?

- Distribution Management during crisis
- Consumption Management during crisis
- Crisis prevention and control techniques
- Leakage Finding techniques
- Pressure reduction techniques in water distribution system.

- Installation of new pressure reducing valves in areas which pressure inside the network is high .
- Re evaluating the water network again .

- Advertising .
- Separating the water network under each reservoir from rest of the network .
- Control of incoming and outgoing water from each reservoir .
- Reduction of repair Time .
- Reduction of responding to a repair call .

2. How much was the budget scale for the activities of drought mitigation (latest fiscal year)?

~~(Rs. 70,000,000,000)~~ Rls 70,000,000,000, - Rls

* If you have the break down , please attach the list or something.

deep wells , pump stations , Transfer of water by pipe

V. Expectation for the training course

and other activities in

1. What kind of technologies are required for drought mitigation in your country?

2. What do you expect for the training course?

- Distribution Management during crisis
- Consumption Management during crisis
- Crisis prevention and control techniques *
- Leakage Finding techniques
- Pressure reduction techniques in water distribution system.

1. 1/20
d.
3-1/2

**Questionnaire on JICA country focused group training course:
"Water Shortage Management in the Urban Area"**

To Whom it may concern,

We will greatly appreciate your cooperation in answering the following questions regarding the Water Management and Drought Conciliation of your country. Please kindly write in block letters or type and submit it when we visit your university. The answers are utilized for planning the JICA country focused group training course, "Water Shortage Management in the Urban Area".

I. General questions

1. Full name name of the organization: Power and Water Institute of Technology (PWIT)
2. Your name and position: (name) Nemat Hassani
(Position) Head of Water (Civil) Engineering Department
3. Office address and telephone/fax number: PWIT, Abbaspour Bolvard, Vafadar Street
Tehran- Iran
4. Please attach the curriculum or something like that for students in your university
(in English)

II. Activities for Water Management and Drought Mitigation in Iran

1. Please describe the main activities for Water Management and Drought Mitigation your country.

The main activities for Water Resources Management during 20th century in IRAN were concentrated on Dam construction and Reservoir development in urban areas for Drought Mitigation. Some other related programs were project type works on Artificial charge of ground water resources, Artificial precipitation, some limited studies on UFW reduction in urban Water Distribution Networks, and also Water Rationing during drought periods.

2. If Iran has pending issues on drought mitigation, please describe them.

The facing issues are:

- . UFW reduction in urban Water Distribution Networks.
- . Population control and Distribution Regulation.
- . Management and Institutional Development for changing in consumption patterns and rate control
- . Critical Management at Emergency periods like as Earthquake or Drought Seasons.

Many project type activities have been defined and started to execution for Drought Mitigation in whole country, but a few of them were successful because of budget limitation and lack of proper technology and experiences.

III. Plans and Perspective in the field of Water Management and Drought Mitigation.

1. Please describe the future prospects of water consumption and water resources.

Total mean capacity of renewable water resources in Iran is nearly 100 bcm/y for surface water resources and 51 bcm/y for ground water resources. There are some controlled capacity of 52 bcm/y from surface and ground water resources with a high density on some ground water resources. From these controlled capacities 1.9 and 3.7 (totally 5.6) bcm/y are allocated to drinking water from surface and ground water relatively.

Attention to the population growth rate and irregular distribution of population and water resources, it would happened high water shortages at nex 20 years. So there is a need to development of water supply capacities for more than 27 million new consumers (17 millions for urban areas and 10 millions for rural areas) up to 2015.

2. Please describe the plans the future prospects of water management and drought mitigation.

Some water management and drought mitigation programs are under decision and execution like as:

- . Conservation Water Resources Development and qualitative and quantitative protection.
- . Water Reuse, Recycle and Reclamation for different uses like as Industries and Agriculture.
- . Redesign of Urban Water Distribution Networks for pressure control.
- . Application of new technologies for UFW control
- . Design, construction and Operation of new water supply, Conveyance, and Treatment Plants and Upgrading of existing systems.
- . Strengthening of urban water supply systems against earthquake specially in Tehran and some large cities.

IV. Expectation for the training course

1. What kind of technologies are required for drought mitigation in your country?

- . Water Resources protection and Management technologies
- . Leak detection technologies and instrumentation.
- . Water supply and distribution Management after natural disasters like as earthquake and drought seasons.
- . Design and Construction aspects for Water Distribution Networks for alternative pressures, irregular topography and so on
- . Institutional Development and Management for Drought Mitigation in the urban areas.

2. What do you expect for this training course?

I- Lectures and practices

A- Introduction to water distribution management during water shortages and Emergency.

1. Outline of water distribution in Japan
 - . History, water resources, UFW reduction, Tarrif system and recent developments.
2. Introduction to water shortage
 - . Effects & Results, rationing methods and new problem solving methods
3. Organization structure and institutional development
 - . Organization structure for water works in Japan
 - . Operation and maintenance programming in Japan
 - . Institutional development plans for Drought Mitigation

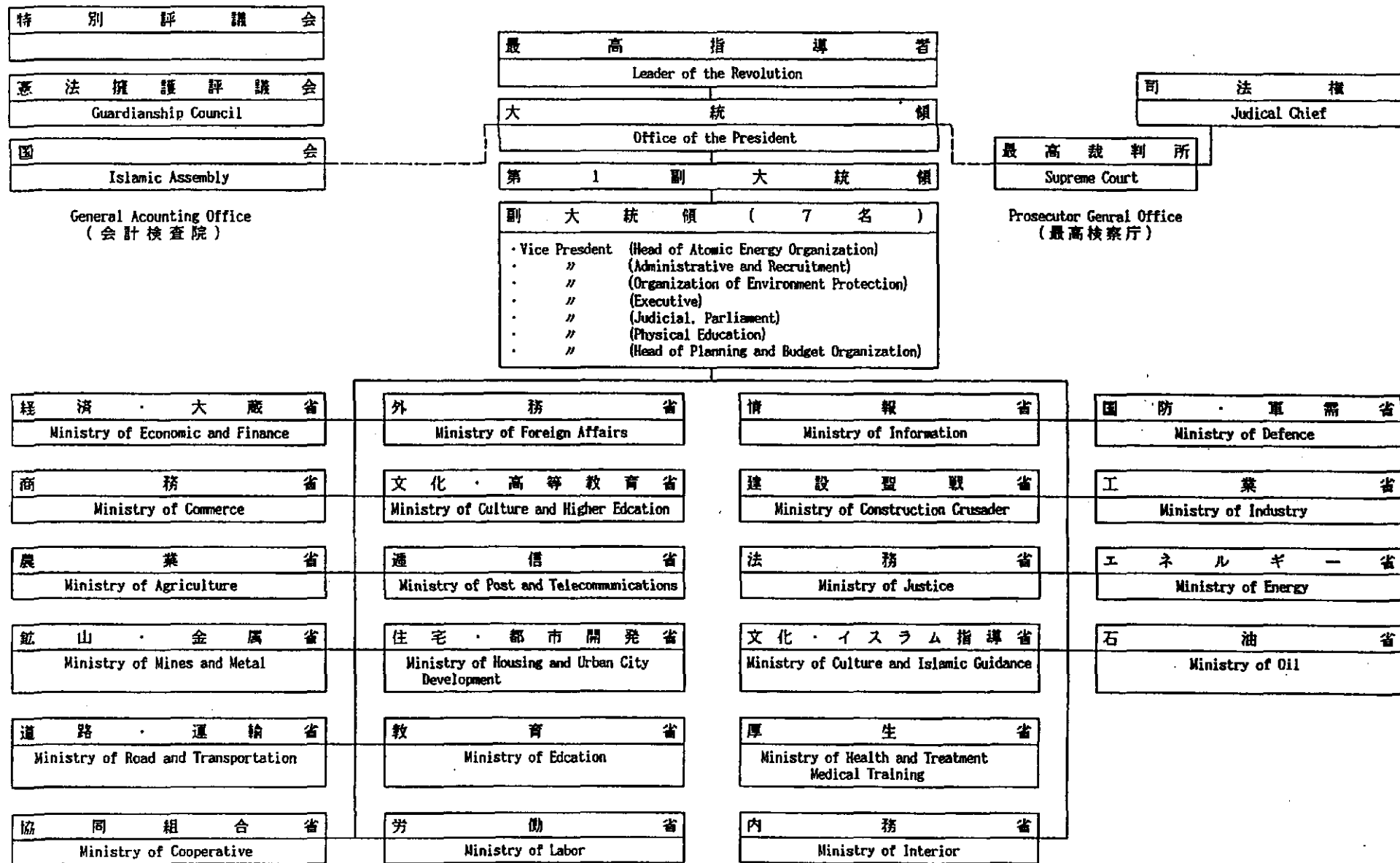
4. Training systems
 5. Public relations and cooperation
 6. Tarrifs and cross subsidation
- B- Lectures for planning, design and exercises
1. Master planning
 - . Methods, surveying, mapping, evaluation and report
 2. Water resources management during drought periods and emergency
 - . Storage, buttling, binetworks, etc
 3. Unaccounted For Water
 - . Introduction of UFW components
 - . Methodology of UFW study
 - . Pipes, Joints, Fittings and Valves suitable for UFW reduction, shortage period operation and emergency (e.g. Earthquake)
 - . Instrumentation for UFW study
 - . Methodology for water distribution system rehabilitation
 - . Effects of rationing on UFW rates
 4. Water distribution network design
 - . Design methods for water distribution systems with considerations for water shortage and emergency.
 - . Recent developments and adjustments
 - . Design exerces (workshop)
 5. Network construction machinery and execution methods
 6. Operation and Maintenance
 - . Planning and Programming
 - . Automatic control
 - . Maintenance cases, methods and instrumentations
- II- Field trips

VI. Others

- If you have may suggestions or/and requests for this training course, please describe here.
- . A short course (1 week) in Iran including introduction to Japan and Japanese culture and language and some aspects of the main course before.
 - . Conduction of an action plan for a network design with presentation in Japan and Iran.

Thank you very much for your kind cooperation

(1) 国家行政組織図 (イラン) -1995年9月現在-



資料3-(1) 補足

平成14年7月現在での変更点 (出典: CIA ホームページ)

○副大統領 7名→5名

- ・現在の構成
 - Vice Pres. for Atomic Energy
 - Vice Pres. for Environmental Protection
 - Vice Pres. for Legal & Parliamentary Affairs
 - Vice Pres. for Physical Training
 - Vice Pres. for Management & Planning

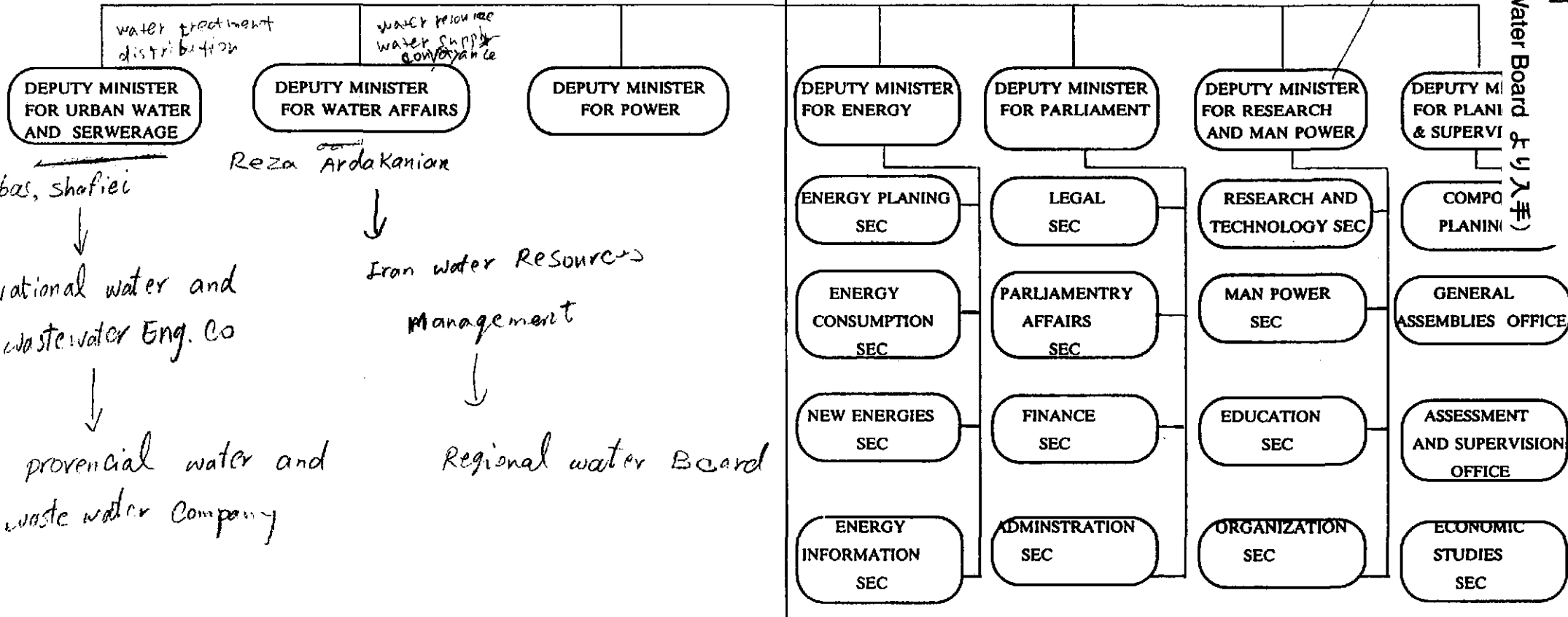
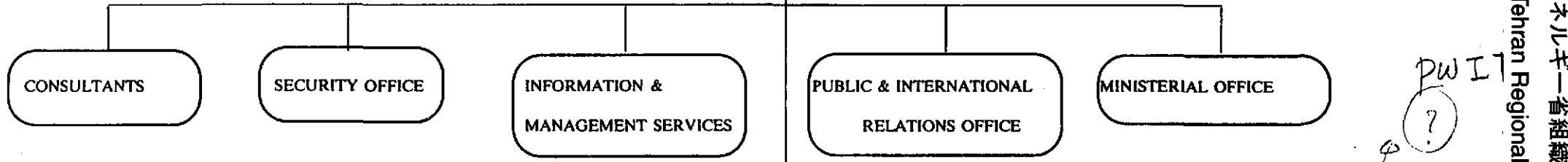
○省 22省→20省

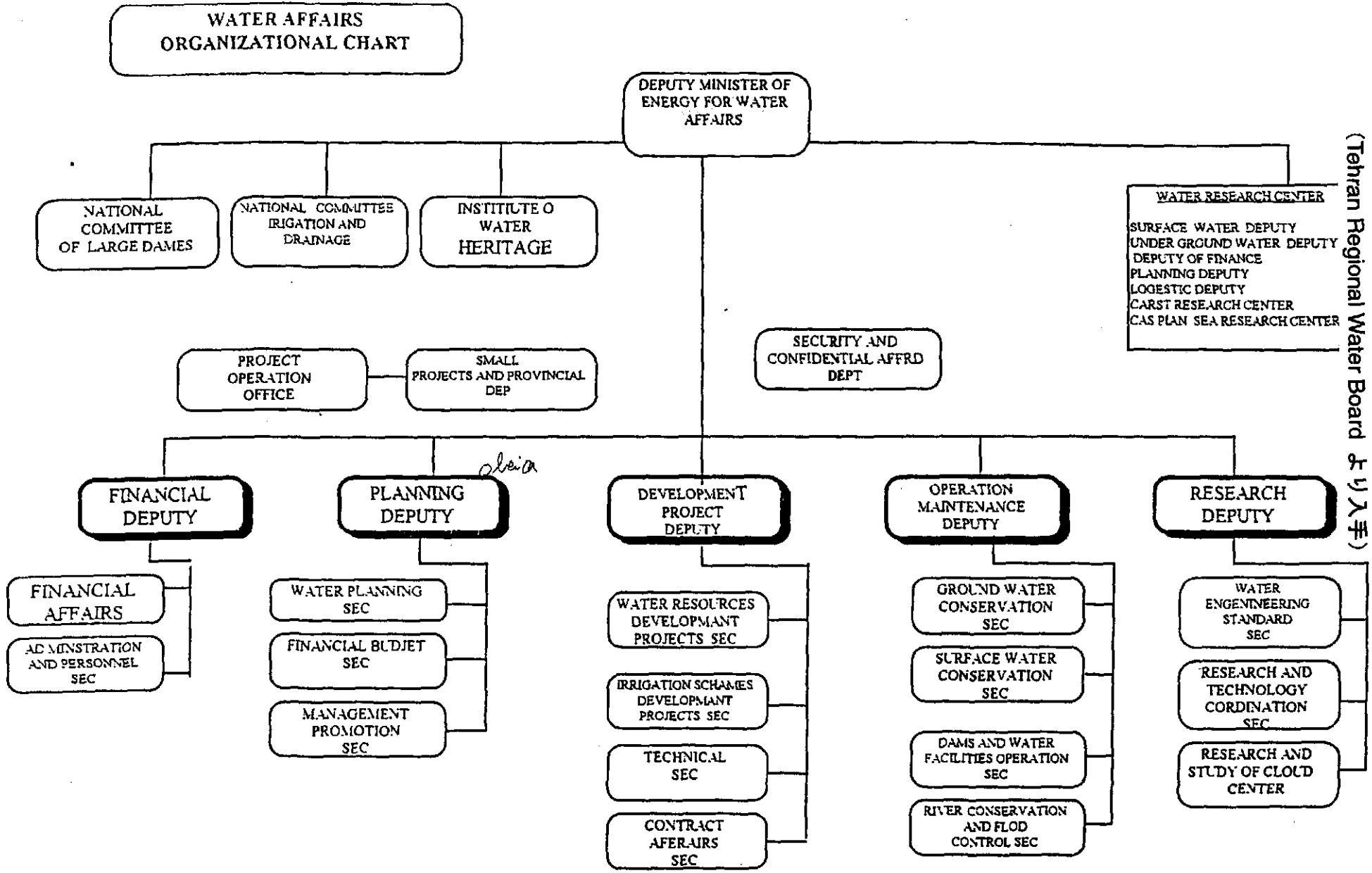
- ・現在の構成 (アルファベット順)
 - Min. of Agriculture Jihad
 - Min. of Commerce
 - Min. of Cooperatives
 - Min. of Defense & Armed Forces Logistics
 - Min. of Economic Affairs & Finance
 - Min. of Education & Training
 - Min. of Energy (エネルギー省)
 - Min. of Foreign Affairs
 - Min. of Health, Treatment & Medical Education
 - Min. of Housing & Urban Development
 - Min. of Information & Communications Technology
 - Min. of Industries & Mines
 - Min. of Intelligences & Security
 - Min. of Interior
 - Min. of Islamic Culture & Guidance
 - Min. of Justice
 - Min. of Labor & Social Affairs
 - Min. of Petroleum
 - Min. of Roads & Transport
 - Min. of Science, Research & Technology

(Tehran Regional Water Board 大り入手)

MINISTRY OF ENERGY
GENERAL ORGANIZATION
CHART

NATIONAL COUNCIL OF ENERGY
MINISTER OF ENERGY
VICE MINISTER



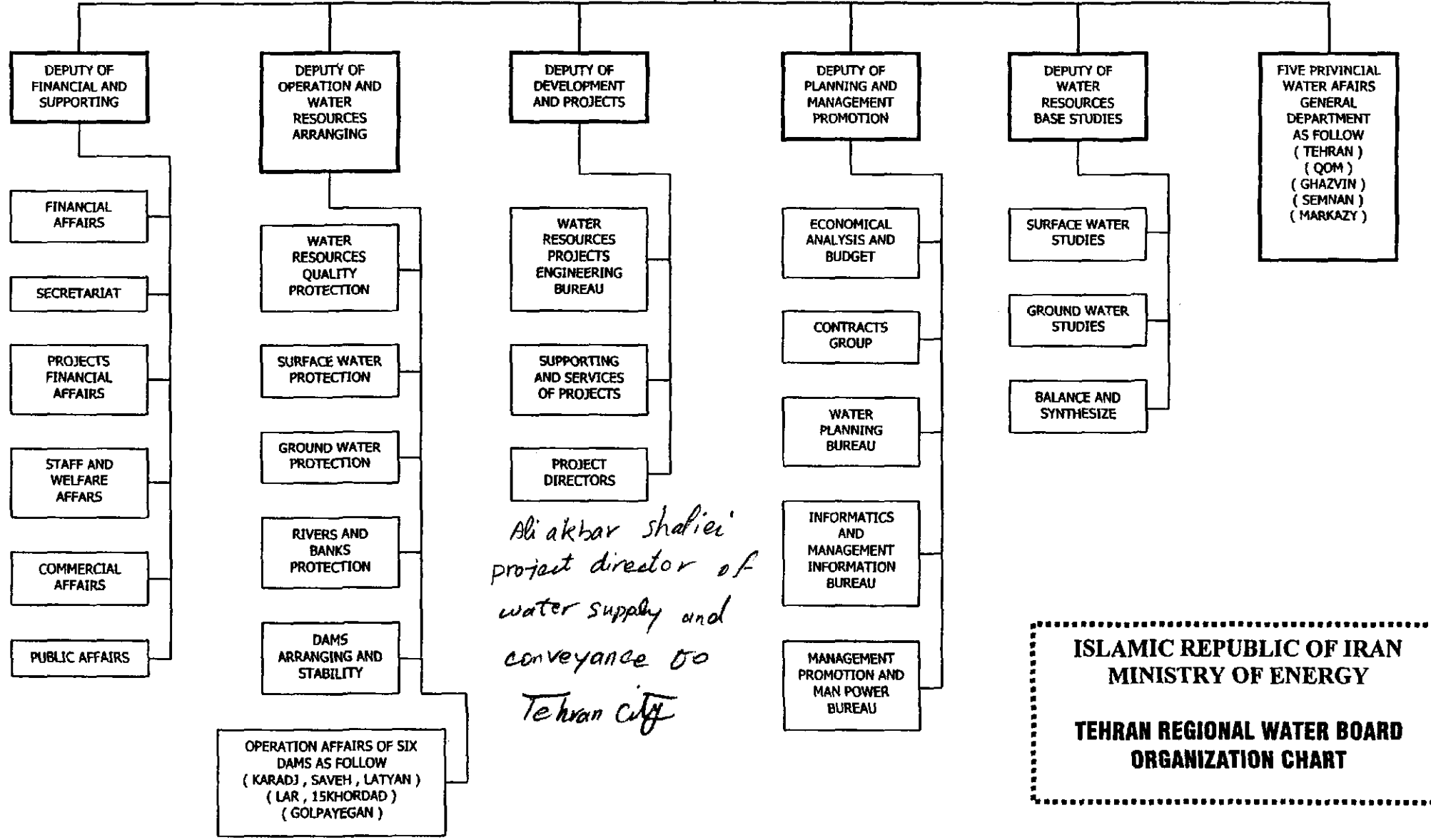
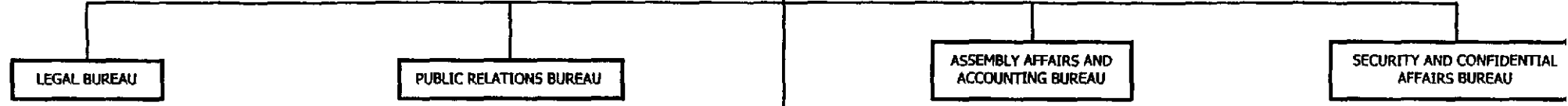


CHAIRMAN AND
MANAGING DIRECTOR

Taghi Zadeh

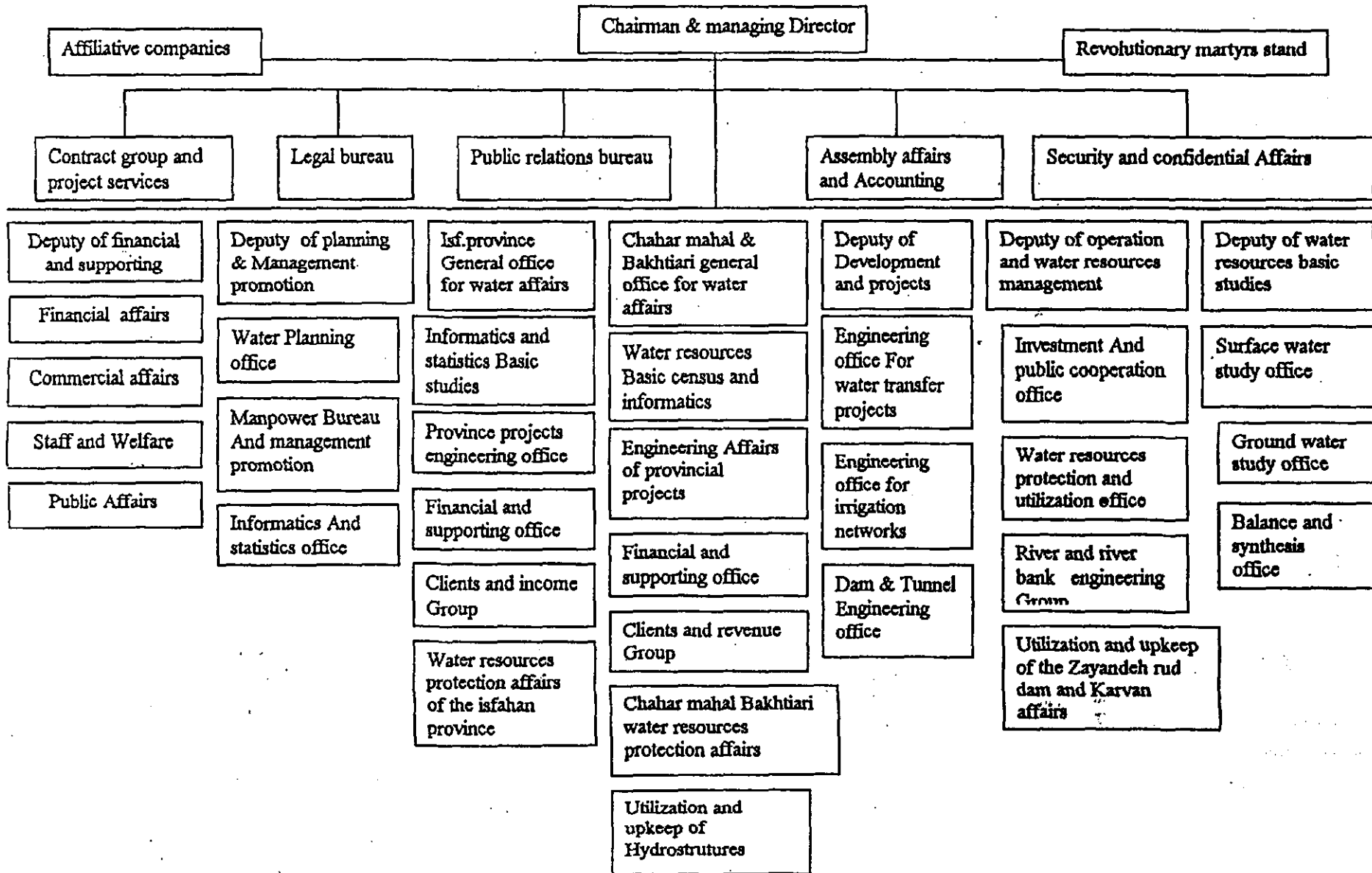
AFFILIATIVE
COMPANIES

REVOLUTIONARY
MARTYRS STANDS



ISLAMIC REPUBLIC OF IRAN
MINISTRY OF ENERGY
TEHRAN REGIONAL WATER BOARD
ORGANIZATION CHART

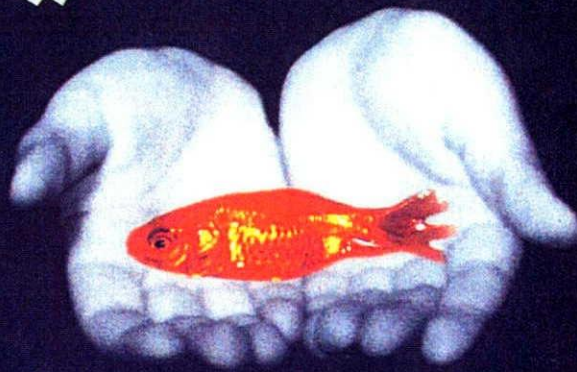
ORGANIZATIONAL CHART OF ISFAHAN REGIONAL WATER BOARD



資料 3 - (5) イスファハン地区水利局組織図
 (Isfahan Regional Water Board より入手)



بدون آب کتاب زندگی را باید بست
در مصرف آب صرفه جویی کنیم



هفته صرفه جویی آب نیرماه ۱۳۸۱



روابط عمومی شرکت آب و فاضلاب استان تهران

فراوانی آب یک توهّم است

۲۰ روش مهار بحران آب

تهران همواره محدودیت آب دارد



نشت آب کوزه‌های آبی قسمت معده‌ای
از آب را هدر می‌دهد.



به بچه‌ها آموزش دهیم تا با پیش به موقع شستن
آب را هدر ندهند.



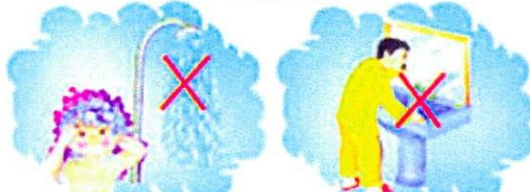
در مراکز آموزشی و مدارس به اشتغال
دانش آموزان تذکر دهید و آنان را
به مصرف صحیح آب تشویق کنید.



برای نوشیدن آب صحت چند قطعه یخ در لیوان
قرار دهید و سپس شرب آب را باز کنید.



بهای شستن اموال خود با شستگ آب
از چند سطل آب هم می‌توان استفاده کرد.



هنگام استحمام شستن دست و رو و سرویس رفتن
ثروتمی ندارد شرب آب به طور پیوسته باز باشد.



هنگام اصلاح ساختمان از کار کردن ساندیس
بجایگزین آب تمهید شده استفاده نکنند.



سرویس‌ها را ابتدا از طرفی بچسباند سپس
آب بکشند.



مانند سایر ماشین‌های خانگی زبانی آب مصرف می‌کنند.
در هر بار استفاده از ماشین لباسشویی حداکثر لباس
گند را در دستگاه قرار دهید.



زمانی که به مسافرت می‌روید
شیر فلکه بعد از تسور آب را ببندید.



تا حد امکان از آب شرب برای فضای سبز استفاده نشود.
با چاه را در شب یا صبح زود آبیاری کنید
تا از تبخیر آب جلوگیری شود.



برای شستن ظروف غذا ابتدا راه خروجی
آب ظرفشویی را بسته و سپس ظروف را در آب
قرار دهید و پس از شستن، آچاره آب بکشند.



ابتدا شرب را ببندید و بده به کار دیگر بپردازید.



با وجود کمبود آب، ثروتمی به شستویی
ببازده روی عطاری مغازه و منزل نیست.



ضروری است برای اطمینان از سلامت توله‌ها
و شربهای آب برنما کنترل شوند.



ابتدا خاک و چمن‌ها را جارو کنید و سپس با مصرف
آب کمتر آنها را تمیز نگه‌دارید.

در مواردی که امکان پذیر نیست
از وسایل کاهش دهنده مصرفی،
نشر شربهای لخت و وصل، سرشربهای
بودر کننده و شربهای فضای شستن
استفاده کنید.

**جدول استاندارد مصرف آب آشامیدنی
بر اساس ۱۵۰ لیتر برای یک نفر در روز**

استحمام	۵۰ لیتر	نظافت خانه و
دستشویی	۳۰ لیتر	آبیاری باغچه
لباسشویی	۲۰ لیتر	کوچک و متوسط
بخت و بیز	۱۵ لیتر	آشامیدن و غیره
ظرفشویی	۱۵ لیتر	جمع کل
		۱۵۰ لیتر



روابنه عمومی آب و فاضلاب استان تهران



با استفاده از یک آجر و یا بتری،
تخلیه سطل‌ها و با تلاش ناگه
نواختن کاهش دهید.

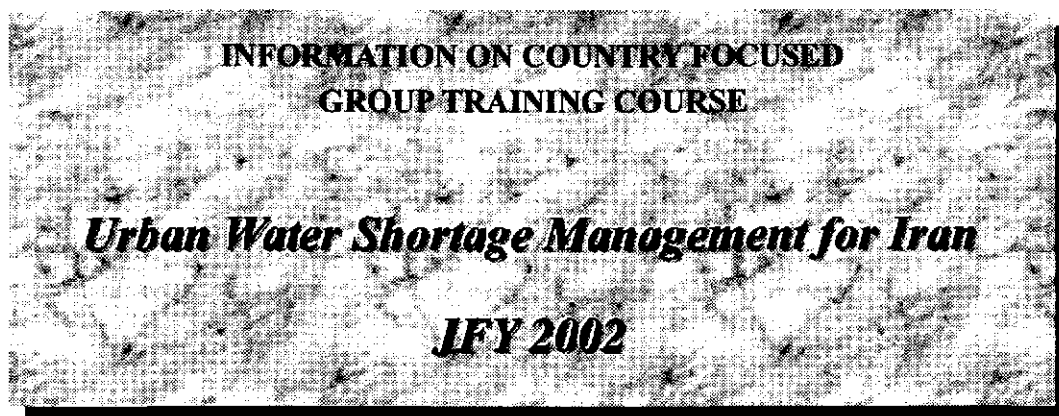
資料5 研修カリキュラム案

平成14年度 イラン国別特設研修「都市域における水不足対策」カリキュラム(案)

月/日	曜日	講義時間	講義内容	研修種別	講師所属機関	場所
1.7	火		来日			
1.8	水		ブリーフィング			
1.9	木	11:00~12:00	開講式		国交省河川計画課・国総研・土研・IDI	TBIC
		13:30~16:30	Kick-off paper発表会	発表・討議	国交省河川計画課・国総研・土研・IDI	TBIC
1.10	金	10:00~12:00	日本と世界の降雨特性	講義	気象庁気象研究所	TBIC
		13:00~15:00	日本の河川と河川行政の概要	講義	国交省河川局河川計画課	TBIC
1.11	土					
1.12	日					
1.14	火	10:00~12:00	日本の水資源と水資源行政の概要	講義	国交省水資源部水資源計画課	TBIC
		13:00~15:00	日本の河川に関する法制度	講義	国交省河川局水政課	TBIC
1.15	水	9:00~12:00	水文観測	講義	土研水工研究グループ水理水文チーム	土研
		13:00~15:00	水質汚濁対策	講義	土研水循環研究グループ水質チーム	土研
1.16	木	10:00~12:00	地下水の適正利用・リチャージ	講義	埼玉大学地圏科学研究センター	TBIC
		13:00~15:00	水資源管理(日本の漏水対策)	講義	国交省河川局河川環境課	TBIC
1.17	金	10:00~12:00	日本の水道行政組織及び機構・水道法解説	講義	厚生労働省水道課水道技術係	TBIC
		13:00~15:30	日本の水道経営・水道料金	講義	日本水道協会調査部	TBIC
1.18	土					
1.19	日		移動(つくば→東京)			
1.20	月	10:00~16:30	漏水を考慮した水運用システム[水道計画講義含む] ①原水計画②配水計画(配水ブロック化、無収水削減含む)③ポンプ運転計画④ データ監視⑤水運用技術(水運用策定ソフト、配水量予測ソフト、管路異常検知 ソフト等)⑥東京水道歴史館(お茶の水)⑦再生水利用システム(東京都庁)⑧ 節水に関する広報活動	視察・講義	東京都水道局	東京都
		9:00~12:00				
1.21	火		移動(東京→船橋)			
		13:30~17:00	工業用水の再利用(耐震性水道管継手)	視察	クボタ	千葉県
			移動(船橋→東京)			
			移動(東京→群馬)			
1.22	水	13:00~17:00				
1.23	木		漏水時の水文情報利用や貯水池総合運用に関する講義	講義・視察	国交省関東整備局利根川ダム統合管理所	群馬県
		9:00~17:00	ダム統管、ダム、導水施設等の視察			
1.24	金	9:30~12:00	移動(群馬→東京)			
		13:00~15:30	レビューディスカッション(ファイナルディスカッションテーマ確定・要望聴 取)	討議	国交省・国総研・土研・JICA・ IDI・日本水道協会調査部	IDI
1.25	土					
1.26	日		移動(東京→福岡)			
1.27	月	9:00~17:00	水資源開発計画(地下水利用含む)・漏水時の水資源施設の総合運用・漏水時 における漏水調整・高度浄水処理場	講義	九州地方整備局	福岡県
1.28	火	9:00~17:00	水資源開発施設(筑後川河口~山口調節池、江川・寺内ダム、福岡導水)・節水 対策装置・高度浄水処理場(多々良浄水場:建設中)・海水淡水化施設	視察	九州地方整備局・水資源開発公社・ 福岡市水道局	福岡県
1.29	水	9:00~15:00	節水対策・漏水時の対応(断水方法含む)・配水ブロック化・無収水削減・広報 (小学生への教育含む)	視察・講義	福岡市水道局	福岡県
1.30	木		移動(福岡→神戸)			
		13:00~16:00	大地震時の水供給・リスクマネジメント・耐震性の水道管・配水ブロック化・ 高度浄水処理場(阪神水道企業団)・水の科学館	講義・視察	神戸市水道局	兵庫県
1.31	金	9:00~15:00				
2.1	土					
2.2	日		移動(京都→つくば)			
2.3	月	9:00~17:00	ファイナルレポート作成(予備日)			TBIC
2.4	火	9:00~17:00	ファイナルレポート作成			TBIC
2.5	水	9:00~17:00	ファイナルレポート作成			TBIC
2.6	木	10:00~16:00	ファイナルレポート発表会	発表・討議		TBIC
2.7	金	9:00~12:00	レビューディスカッション(日本とイランの状況の違いと日本の方法のイランへ の適用の適否と適用時の留意点)	討議	国交省河川局河川計画課・国総研・ IDI・日本水道協会調査部	TBIC
		12:00~13:30	閉講式・閉講パーティ		国交省河川局河川計画課・国総研・IDI	TBIC

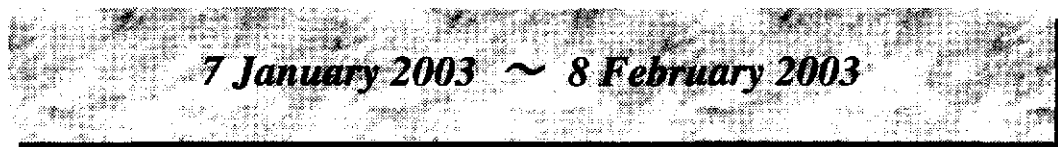
TBIC: JICA筑波国際センター

IDI: 国際建設技術協会



イラン国別特設：都市域における水不足対策

COURSE NO.: J-02-20287



THE GOVERNMENT OF JAPAN
JAPAN INTERNATIONAL COOPERATION AGENCY

Preface

The Japanese Government extends official development assistance (ODA) to developing countries to support self-help efforts that will lead to economic progress and a better life for the citizens of those countries.

Since its foundation in 1974, the Japan International Cooperation Agency (JICA) has implemented Japan's technical cooperation under the ODA programme.

Currently, JICA conducts such activities as training, dispatch of experts, provision of equipment, project-type technical cooperation, development study, dispatch of cooperation volunteers (JOCV), survey and administration of capital grant aid programmes.

The training programme for overseas participants is one of JICA's fundamental technical cooperation activities for developing countries. Participants come from overseas in order to obtain knowledge and technology in a wide variety of fields.

The objectives of the JICA training programme are:

- (1) to contribute to the development of human resources who will promote the advancement of developing countries, and
- (2) to contribute to the promotion of mutual understanding and friendship.

This course "Urban Water Shortage Management for Iran" starts in 2003 as a country-focused training course, and 10 participants will be accepted each year until 2005. It is aimed at contributing to solve the water shortage problems facing the urban areas of Iran, by providing the latest knowledge on water management to people who are engaged in mitigation of urban water shortage problems.

II. CURRICULUM

1 Outline of Water Resources in Japan

- 1.1 Rainfall characteristics in Japan, Iran and other countries
- 1.2 Water resources in Japan
- 1.3 Administration of water resources development and related laws

2 Water Shortage Management in Long-Term Planning

- 2.1 Water resource development in Japan
- 2.2 Monitoring and information use for water resource management
 - (a) Hydrological monitoring
 - (b) Utilization of precipitation and river flow information
- 2.3 Water works undertaking
 - (a) Water works administration and water works laws (including water tariff and water works management)
 - (b) UFW (unaccounted-for water) control
 - (c) Zoning for water distribution
 - (d) Water supply operation system
 - (e) Water conservation in a municipality (including information activities for water saving and development / promotion of low-flow plumbing device)
- 2.4 Other activities
 - (a) Reclaimed water utilization system
 - (b) Rainwater collection facilities
 - (c) Recycle system of industrial water

3 Emergency Activities at Drought Periods

- 3.1 Activities in water resource management
 - (a) Regulations and approaches
 - (b) Sector coordination for rationing water resources (domestic / industrial / irrigation water)
 - (c) Reservoir management
 - (d) Groundwater management at drought period
- 3.2 Water works activities
 - (a) Public information and education strategy
 - (b) Rationing water supply
 - (c) Anti-earthquake measures in water supply: risk management, damage control and emergency supply

4 Site Visits

5 Presentation & Discussion

5.1 Presentation of kick-off papers

At the beginning of the course, participants will be requested to present their kick-off papers summarizing their concerns on current situations and problems of water resource management / water supply in Tehran or other cities / regions.

5.2 Presentation of and discussion on final reports

During the training period, participants will prepare final reports to suggest some ideas to improve current situations in Tehran or other cities / regions.

III. REQUIREMENT FOR APPLICATION

Applicants should be:

- (a) nominated by the Iranian government in accordance with the procedure mentioned in IV,
- (b) currently engaged in water resource management or water supply with more than 5 years' experience in these fields,
- (c) engaged in planning / implementing measures and training against water shortage problems,
- (d) university graduates or equivalent,
- (e) good working knowledge of English,
- (f) under 50 years of age,
- (g) in good health both physically and mentally fit for the training, and
- (h) non-military personnel..

ATTENTION

Participants are required;

- (1) not to change course subjects or extend the course period:
- (2) not to bring any members of their family,
- (3) to return to their home country at the end of their training course according to the international travel schedule designated by JICA,
- (4) to refrain from engaging in political activities or any form of employment for profit or gain, and
- (5) to observe the rules and regulations of their place of accommodation and not to change accommodations designated by JICA.

IV. PROCEDURE FOR APPLICATION

1. The government of Iran desiring to nominate applicants for the course should fill in and forward one (1) original and three (3) copies of the Nomination Form (Form A2A3) and the Kick-off paper for each applicant, to Embassy of Japan **by 25 November 2002.**
2. the Embassy of Japan will inform the applying government whether or not the nominee's application has been accepted **not later than 9 December 2002.**

3. Kick-off paper

Applicants are required to prepare a Kick-off paper. It should be typewritten in accordance with the format indicated below and submitted together with the Nomination Form.

The contents to be included are as follows.

1) Name of training course

2) Name of applicants

Describe subjects below in 200 words or more

- For applicants categorized as country-level matters only (Min of Energy, NWWEC, etc.)

3) Current situation of water supply and water resources management in Iran.

- For applicants in charge of region-level matters only

4) Current situation of water supply or water resources management related to his/her own job.

- For all applicants

5) Detailed description of the responsibilities of his/her position.

6) Technical / administrative problems on water shortage related to his/her own job.

7) Expected outcome in this course.

At the beginning of the course, participants will make 15-minutes presentation of individual Kick-off paper. Participants are therefore requested to prepare presentations with such **visual aids material** as power point, transparencies or slides while being in Iran.

V. OTHER MATTERS

- 1) Pre-departure orientation is held at the JICA Office (or the Embassy of Japan) to provide the accepted applicants with details on travel to Japan, conditions of training, and other matters. Participants will see a video, "TRAINING IN JAPAN," and will receive a textbook and cassette tape, "SIMPLE CONVERSATION IN JAPANESE." A brochure, "GUIDE TO TRAINING IN JAPAN" will be handed to each accepted applicant before (or in the time of) the orientation.
- 2) Participants who have successfully completed the training course will be awarded a certificate by JICA.



CORRESPONDENCE

For inquiries and further information, please contact a JICA office or Embassy of Japan, or address correspondence to:

**First Programme Division,
Tsukuba International Centre (TBIC),
Japan International Cooperation Agency (JICA)**

Address: 3-6, Koyadai, Tsukuba-shi, Ibaraki-ken 305-0074, JAPAN

Tel.: (+81-298)-38-1118 Fax.: (+81-298)-38-1790

URL: <http://www.jica.go.jp/> E-mail: jicatbc1@jica.go.jp

資料7 収集資料リスト

No	タイトル/発行年	発行機関	頁数	言語	備考
1	2000-2002 イラン渇水レポート	イスラフハン省	16	波	
2	MISSION REPORT : UNITED NATIONS TECHNICAL MISSION ON THE DROUGHT SITUATION IN THE ISLAMIC REPUBLIC OF IRAN, 2000	国連	70	英	
3	NATIONAL WATER MANAGEMENT ORGANIZATION STRUCTURE	イスラフハン省	31	英	
4	PRESENTATION OF TEHRAN SEWAGE PROJECT, 2001	Tehran Sewage Com.	30	英波	
5	Tehran Province Water & Sewage Company (会社概要), 2001	テヘラン州 上下水道公社	16	英	
6	Department Of Water Quality Control & Laboratories	同上	-	英	パンフレット
7	WATER TREATMENT PLANT no. 1	同上	-	英	パンフレット
8	WATER TREATMENT PLANT no. 2	同上	-	英	パンフレット
9	2000-2002 テヘラン渇水レポート	同上	40	波	
10	テヘラン州上下水道公社週報, 2002	同上	-	波	
11	イスファハン地区水利局事業概要	イスファハン地区水利局	95	波	
12	ESFAHAN Potable Waterworks Facilities	イスファハン州 上下水道公社	18	英	
13	イスファハン浄水場パンフレット	同上	-	波	パンフレット
14	A TOURIST GUIDE TO TEHRAN, 1999	GITASHENASI	-	英	地図
15	A Tourist Guide to TEHRAN & Tourist Map of North of Tehran	同上	-	英	地図
16	A Tourist Guide To TEHRAN New and Revised Edition, 2002	同上	-	英	地図
17	MAP OF ISRAHAN City	同上	-	英波	地図
18	New Roads Map of ESFAHAN PROVINCE	同上	-	英波	地図
19	節水広報用ポスター4種	テヘラン州 上下水道公社	-	波	ポスター
20	国家行政組織図(イラン), 1995	在テヘラン日本大使館	-	日	ハンドアウト
21	MINISTRY OF ENERGY 組織図	テヘラン地区水利局	-	英	ハンドアウト
22	WATER AFFAIRS 組織図	同上	-	英	ハンドアウト
23	TEHRAN REGIONAL WATER BOARD 組織図	同上	-	英	ハンドアウト
24	ISFAHAN REGIONAL WATER BOARD 組織図	イスファハン地区水利局	-	英	ハンドアウト
25	TEHRAN WATER SUPPLY DEP 概要図	テヘラン州 上下水道公社	-	英	ハンドアウト