

**Status of the Water
and Sanitation Sector in South/Center
Iraq**

STRUCTURE OF PRESENTATION

- **Situation before 1990**
- **Situation 1990 - 1996**
- **Oil for Food Programme**
- **Constraints In Implementation of OFFP**
- **Immediate Sector Requirements of OFFP**

Situation before 1990

ACCESS TO WATER

- Coverage of potable water:
 - Urban > 95%
 - Rural > 75%
- Liters per capita per day (l/c/d):
 - Baghdad 330 l/c/d
 - Other urban cities 250-300 l/c/d
 - Rural 180 l/c/d

Situation before 1990

ACCESS TO SEWAGE DISPOSAL SYSTEMS:

- **Piped sewerage systems: 25 % coverage**
- **On-site systems: 50 % coverage**
- **No system: 25% coverage**

Situation 1990 - 1996

- **Reduction in access to potable water**
 - ▣ **By 3% urban areas**
 - ▣ **By 30% rural areas**
- **Reduction in liters per capita per day**
 - ▣ **Baghdad, 330 to 218 l/c/d**
 - ▣ **Urban, 250 to 171 l/c/d**
 - ▣ **Rural, 180 to 91 l/c/d.**
- **Overall, Water production fell by 40%**

Water and Sanitation in Kerbala



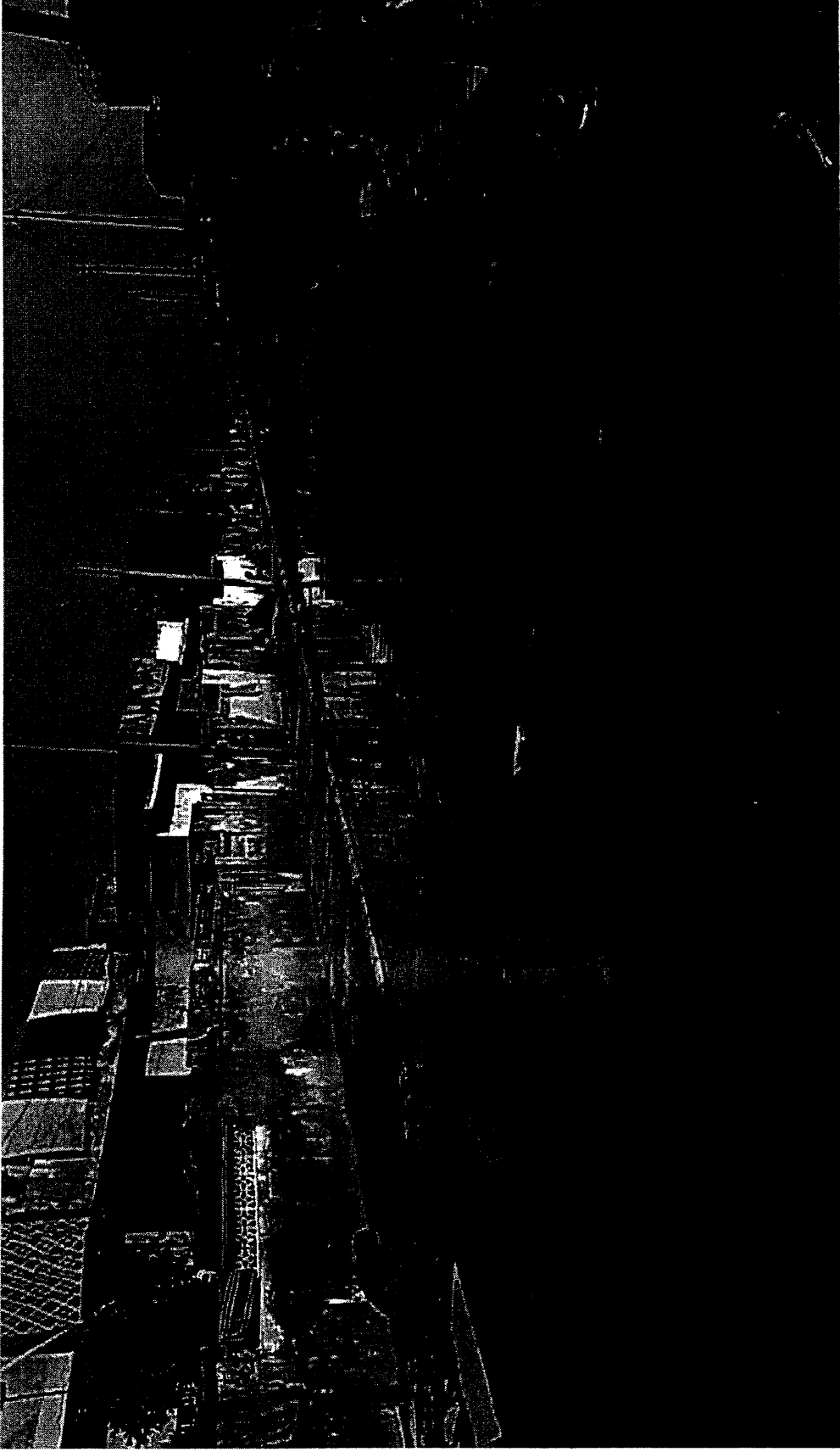
& Women and children fetching water from a broken pipe in Kerbala.

Situation 1990 - 1996

Complete break down in Sanitation Services:

- **All Sewerage Treatment Plants broke down.**
- **500,000 tons of raw sewage pumped into fresh water bodies daily.**
- **Number of service vehicles fell from 6500 units to 700**
- **55% of personnel left the WatSan sector**

Sanitation in Basra



& Sewage flooded street in Basra

Oil for Food Programme 1996-2001

Observation Objectives:

- » **Verify/ establish quantities of goods arrived, distributed and installed.**
- » **Assess adequacy, effectiveness, efficiency and equitability of distribution of OFFP inputs.**

Oil for Food Programme

1996-2001

Current Observation Mechanism:

- _____ Countrywide Observation Advisory Group
- Watsan Sectoral Working Group
- Observers
 - ⑦ Engineers
 - ⑦ Average 19 years experience

Oil for Food Programme

1996-2001

Observation Capability

- **11 international Observers**
- **With at least B.Sc. in Engineering:**
 - ☒ **Civil, water resource, sanitary engineers and Hydrologists.**
 - ☒ **Average of 19 years professional experience**

Oil for Food Programme 1996-2001

Current Observation Tasks/Coverage:

- **Routine Monthly Tracking: 25% of all facilities in the sector.**
- **Monthly End-Use Observation: 60% of relevant sites.**
- **Monthly Chlorine: 70% of relevant sites.**
- **Monthly Assessments: 30% of facilities in the sector.**

Impact of OFFP

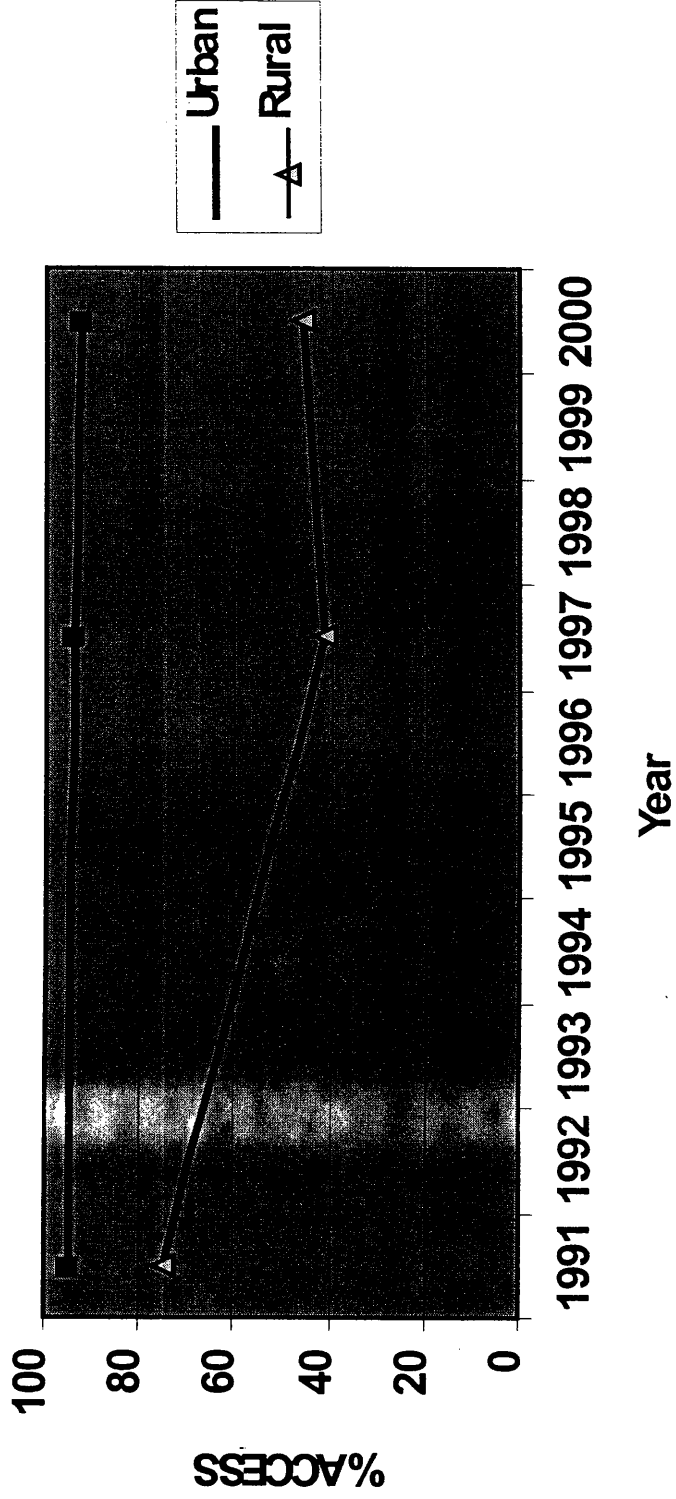
Water sub-sector

- 17% increase in water production at WTPs.
- Marginal improvement in water distribution network.
- Marginal decline in urban access (2%)
- Marginal increase in rural access (5%)
- Continuing decline in l/c/d (at household level)
 - Baghdad, 218 to 150 l/cd
 - Urban, 171 to 110 l/cd
 - Rural, 91 to 65 l/c/d

Impact of OFFP

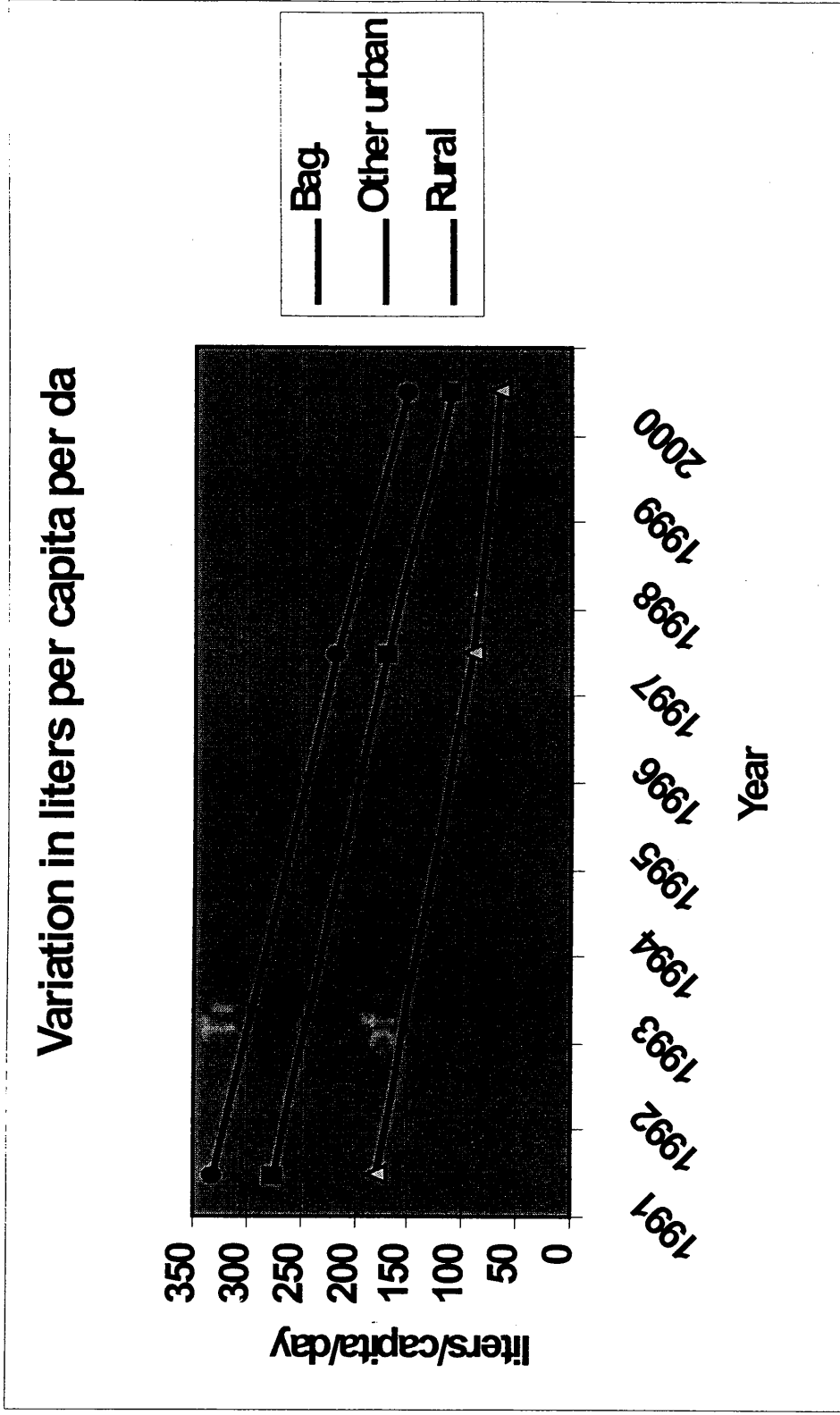
Water Sub-sector 1991-2000

Variation In Access to Potable Water.



Impact of OFFP

Water Sub-sector 1991-2000



Impact of OFFP

Sanitation sub-sector 1996-2001

- **Significant improvement in solid waste disposal in Baghdad City.**
- **Insignificant improvement in sewerage network.**
- **No improvement in the quality of sewage effluent discharged**

Impact of OFFP

Reasons for low Impact

- ✉ **Effect of power cuts.**
- ✉ **Up to 40% water leakage and water losses in the distribution network**
- ✉ **Population Growth**
- ✉ **No cash component, low salaries, limited motivation, lack of qualified staff/brain drain, altogether lead to poor maintenance of the systems.**

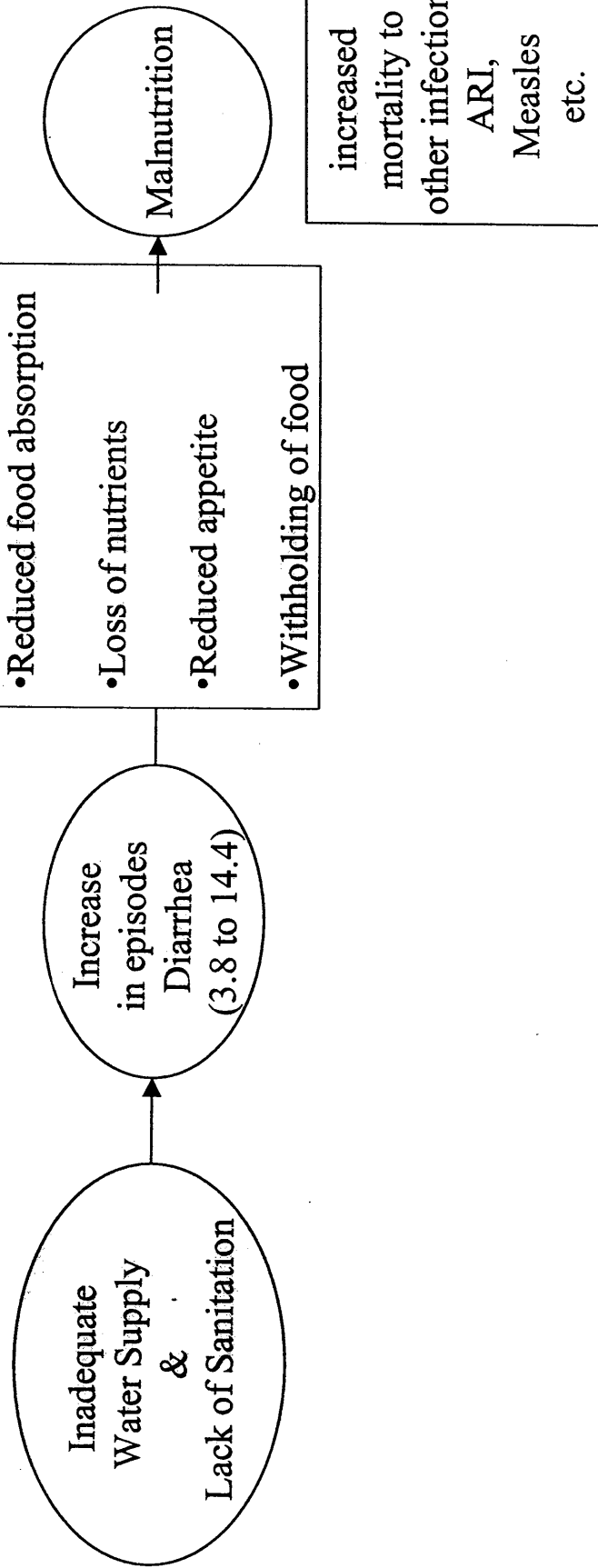
Impact of the Sector Status on children:

⇨ **3.8 diarrhoea episodes/child in 1990**

⇨ **14.4 diarrhoea episodes/child in 1999**

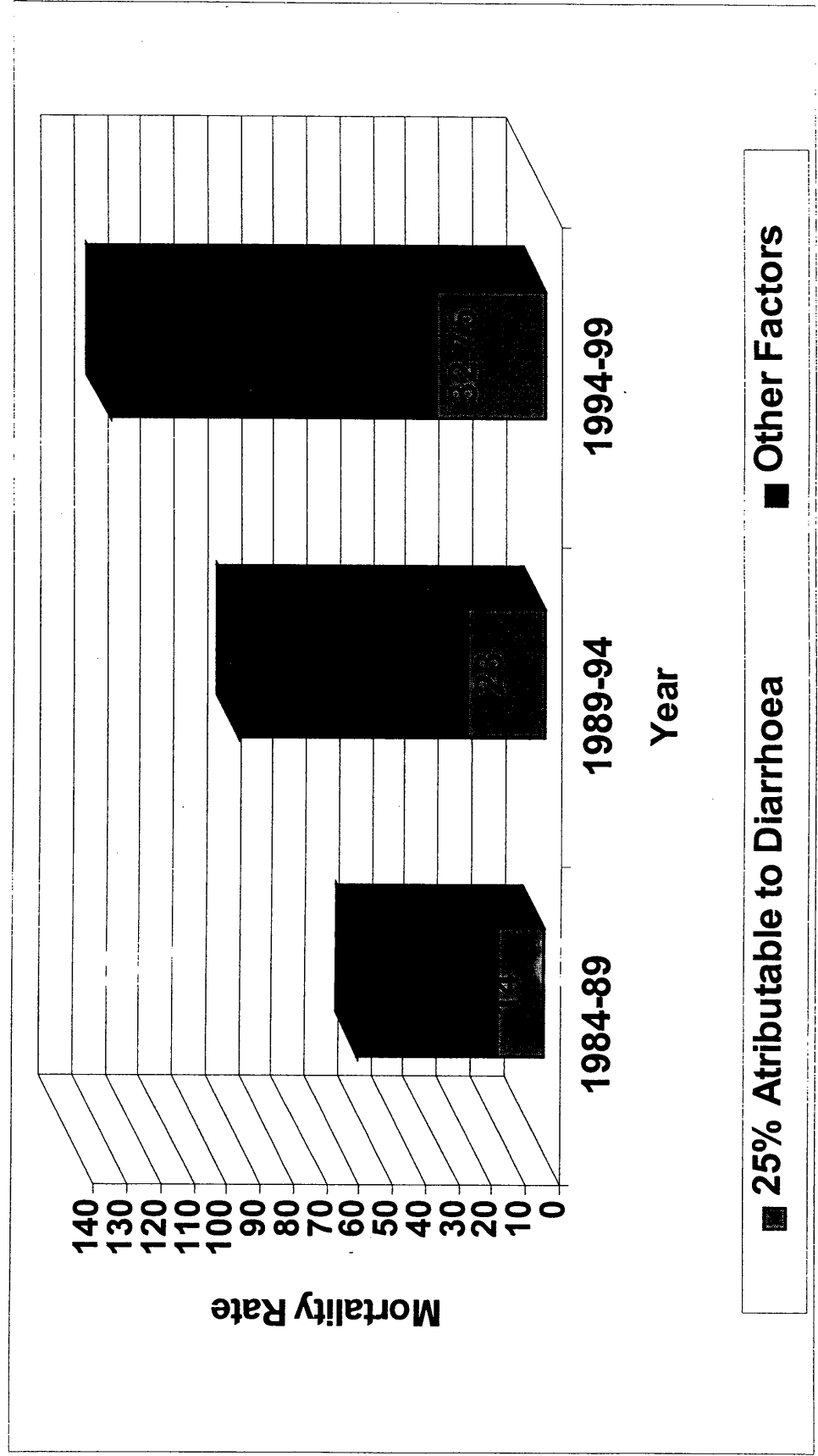
⇨ **25% of U-5 mortality in Iraq is attributable to diarrhoea alone...globally, 19%**

Impact of Inadequate Water Supply and Lack of Sanitation on Child Nutrition/Mortality



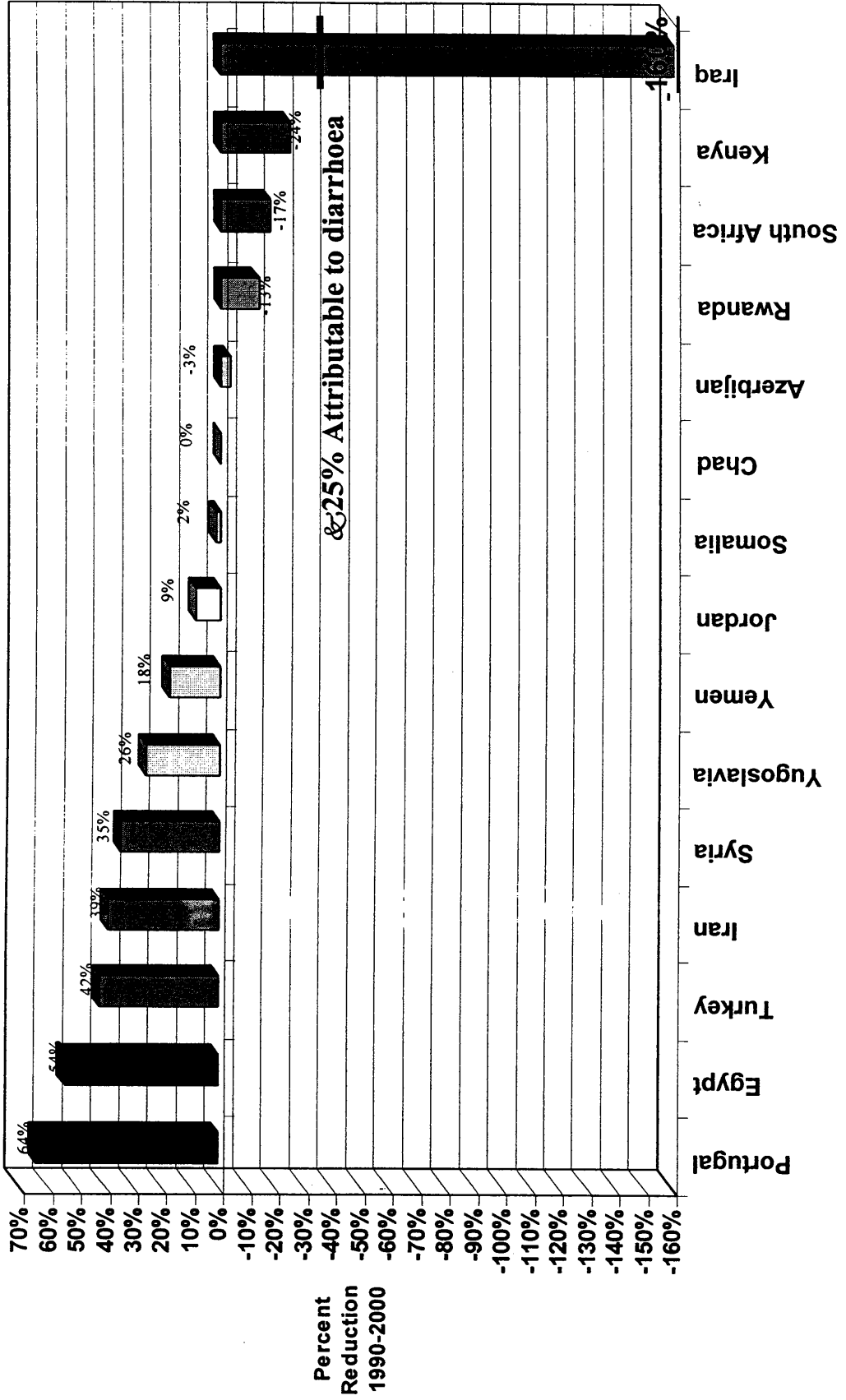
Impact on children: 1990 - 2000

Dramatic rise in under 5 mortality rate



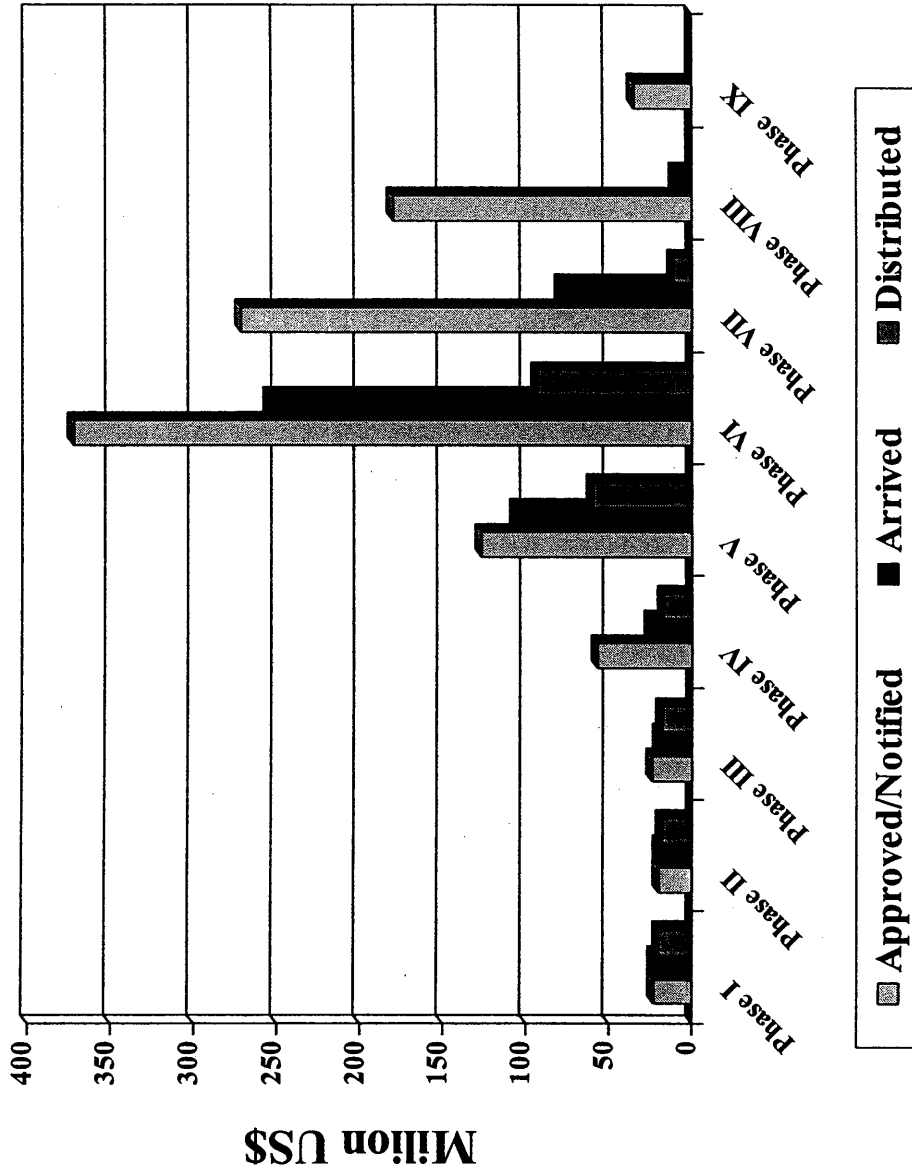
Impact on children: 1990 -2000

Under-Five Mortality Rate - Estimates for a Sample of Countries



OFFP *Inefficiency In Implementation*

Low..... Arrival, Distribution and Utilization Rates.



OFFP

Inefficiency In Implementation

Observation of Chlorine Gas

- **Observation Increasingly difficult**
 - ☒ **Some chlorine gas is produced locally.**
 - ☒ **UN observing only a portion of chlorine used in the country.**
 - ☒ **Inconsistency in quality of both imported and locally produced chlorine gas.**
 - ☒ **Inconsistencies in serial numbering, size and volume of cylinders**
 - ☒ **Leaking chlorine gas cylinders very common.**
 - ☒ **UN observers exposed to health hazards...lack of safety equipment, all of which are on hold.**

OFFP

Inefficiency Implementation

Observation of Chlorine Gas Continued

- **Critical review of chlorine observation procedures is recommended**

OPTIONS

- 1. Drop observation of chlorine entirely.**
- 2. If chlorine must be observed, first provide safety equipment to both UN Observers and local staff.**
- 3. Use statistically valid sample.**

Implementation of OFFP: Constraints

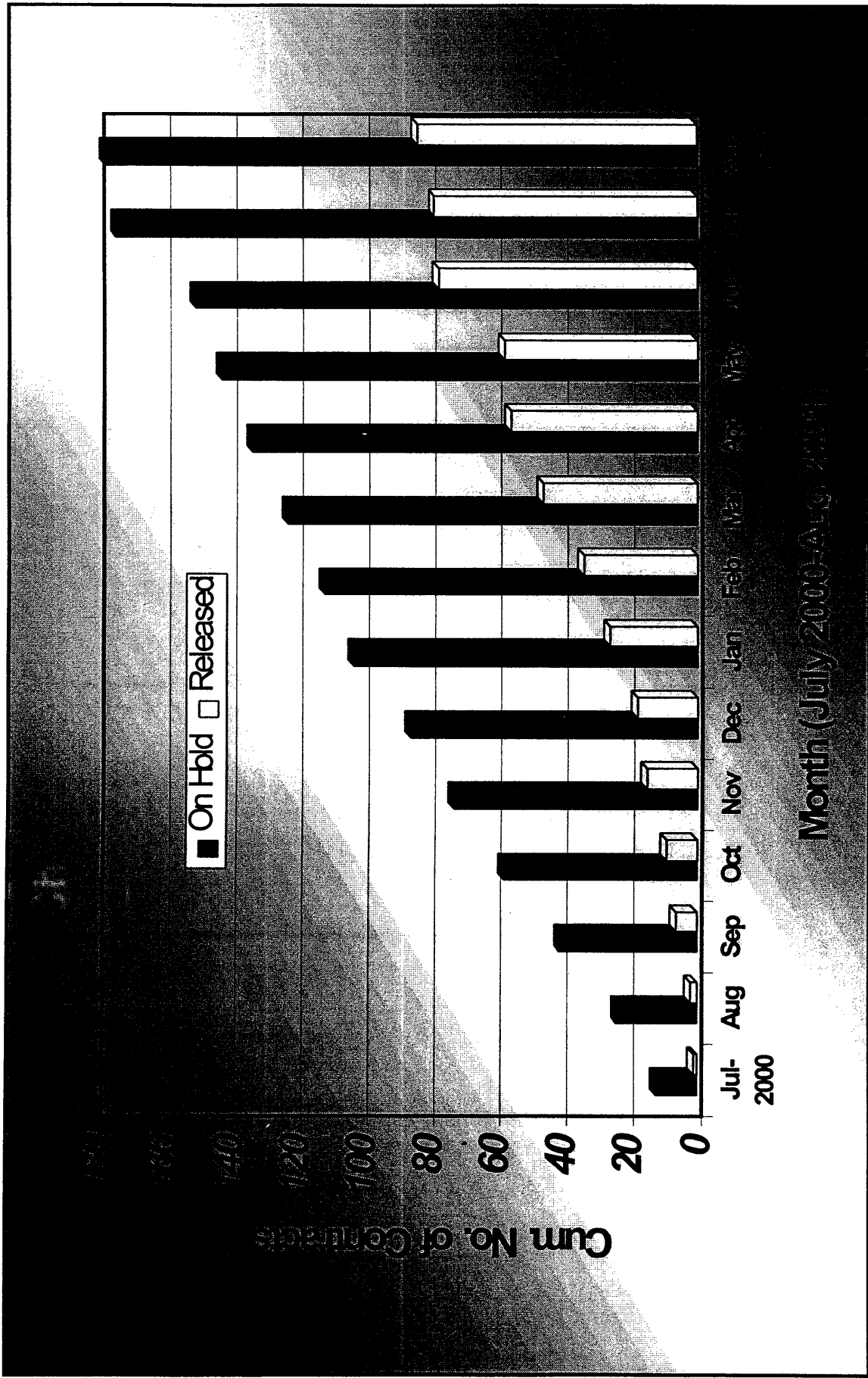
- **Contracts on Hold**
- **Logistics and management**
- **Lack of a Cash Component**

Constraints: Contracts on hold

Size of the Problem:

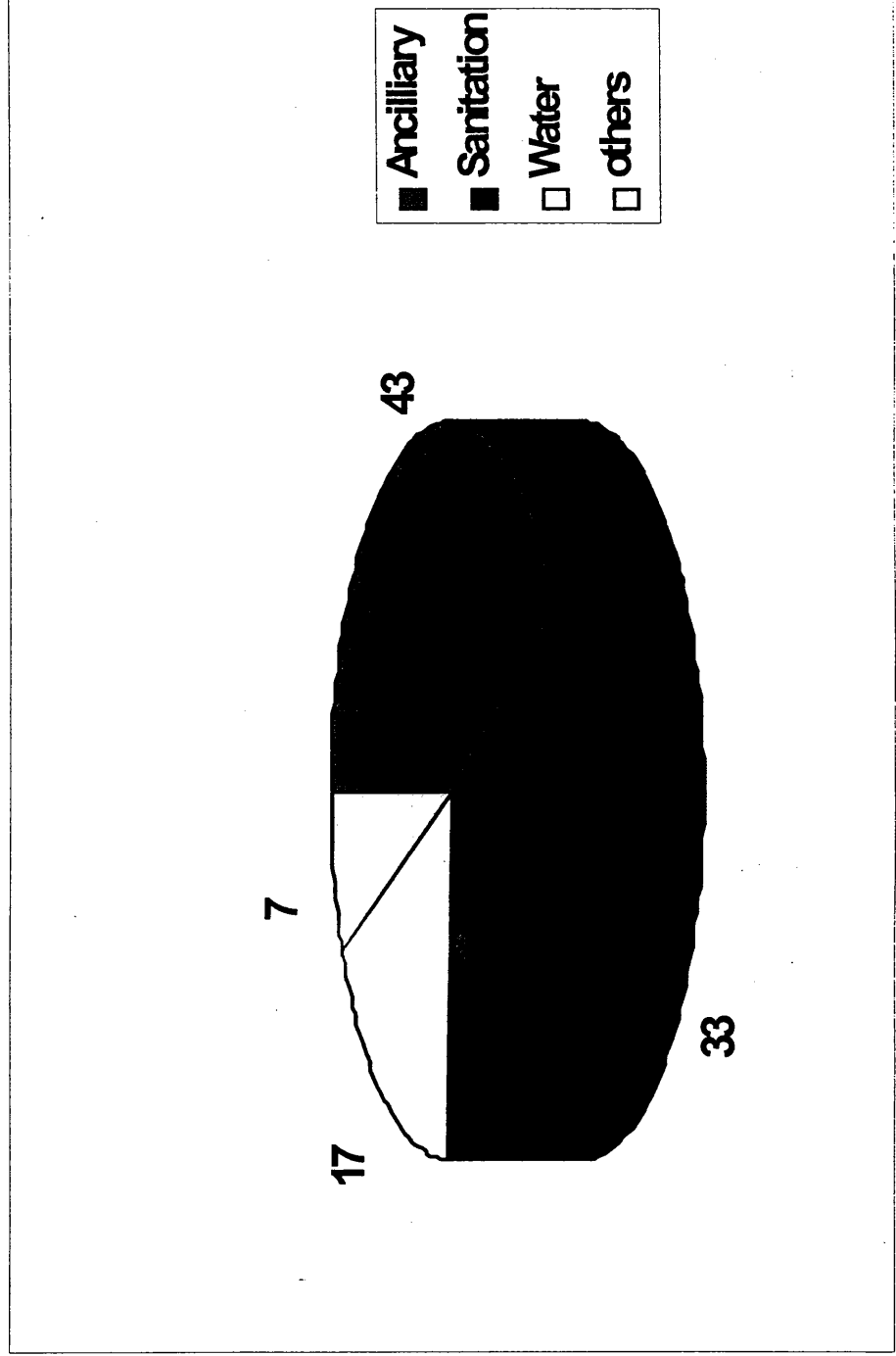
- US\$ 522 million on hold.**
- One third of value of total submitted contracts.**
- Reasons for holds are:-**
 - **44% “1051 List” .**
 - **44% “Additional Information required”, on technical and end-use.**
 - **11 “Dual use/weapons of mass destruction”**
 - **1% Pending “further evaluation” .**

Cumulative Contracts on hold



Constraints: Contracts on hold

Profile of WatSan Categories on hold



Constraints:

Contracts on hold

Ancillary sub-sector is worst hit by holds:

- ☒ 47.5% of goods on hold on “1051 list” are ancillary items.
- ☒ 82.5% of goods on “additional information” .
- ☒ 65% of “Dual Use/WMD” are ancillary items.

Constraints: Contracts on hold:

Impact on implementation of OFFP

- **Slows down implementation rate**
- **Leads to supply-driven instead of need-driven planning**

Contracts on Hold

Summary of humanitarian Impact

Potentially reduces the decrease in the incidence rate of diarrhoea:

☒ *Untreated human and domestic sewage*

☒ *Higher level of river pollution*

☒ *Insufficient water production*

☒ *Doubtful water quality*

Contracts on hold

Reasons to Consider Release of Holds

- ☒ For holds on the “ok info list”, most of 661 committee requirements have been met.
- ☒ No substitutes exists for Goods on “1051 list”
- ☒ 70% of “Dual use items” are for the power sector.

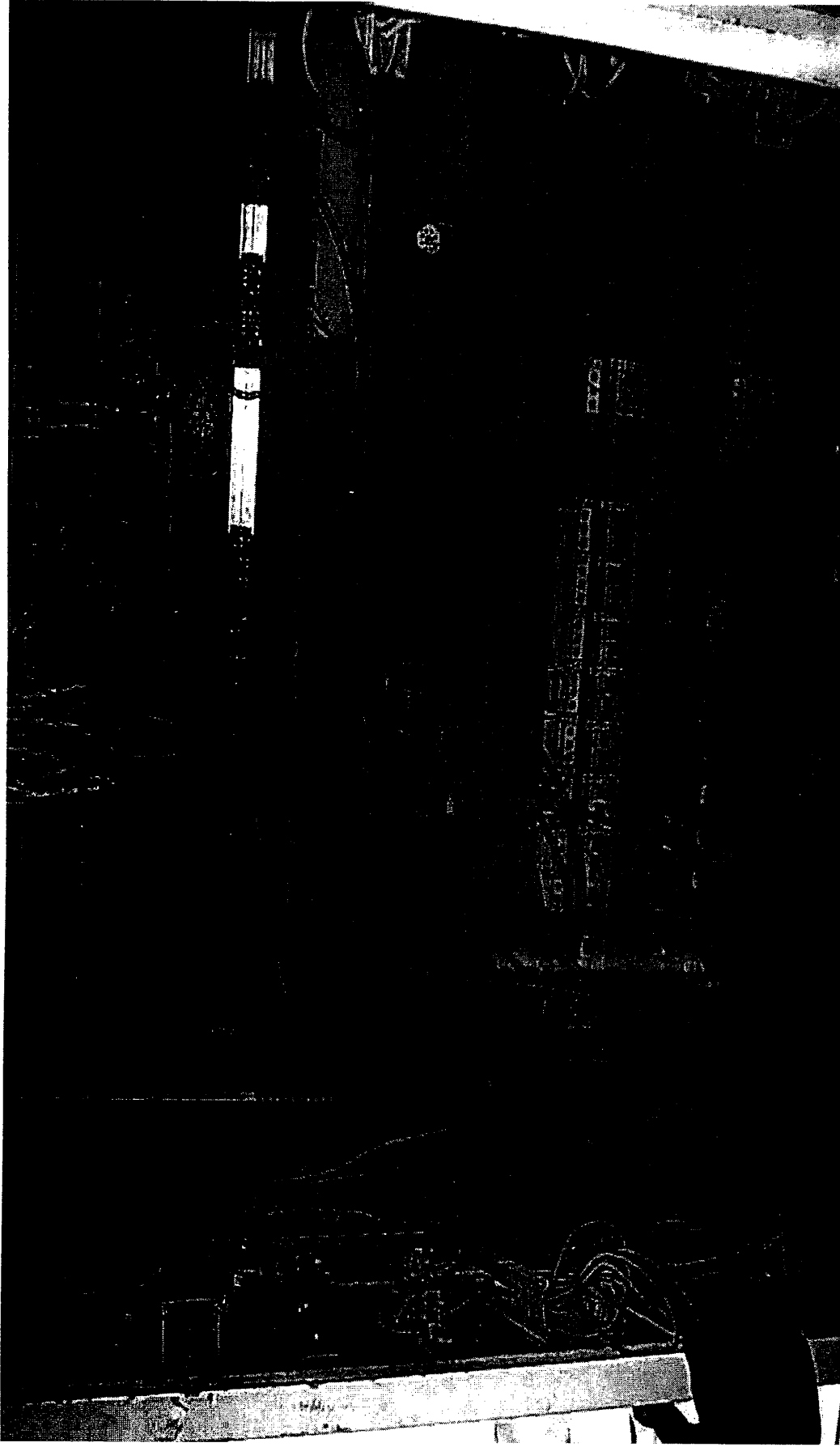
Contracts on hold - Priorities

- **Mechanical and Electrical parts (13 contracts = US\$85M)**
- **Sanitation Equipment (14 contracts = US\$81M)**
- **Water Supply Equipment (34 contracts = US\$99.2M)**
- **Generators, Computers, Handling Equip (12 contracts = US\$53M)**
- **Special Allocation (3 contracts = 20M)**

Constraints: Logistics

- **Continuing electricity shortages**
- **Lack of complementary equipment to specific goods**
- **Limited Cost effectiveness**
- **Lack of transportation vehicles leads to low distribution rate**

Ali- Al-Sharqi CU



&Note condition of the control panel

Constraints: Lack of Cash Component

Low Implementation Efficiency

- ☒ **Easier to replace than repair**
- ☒ **The increment of one cubic meter WTP capacity costs US\$15 if rehabilitation is done with cash assistance**
- ☒ **While in the absence of cash assistance, the increment of one cubic meter WTP capacity costs US\$40.**
- ☒ **Low distribution and utilization rate of MoU supplies**

Constraints: Lack of Cash Component

- **Low salaries, brain drain..depleted human resources.**
- **Weak planning capacity**

Constraints:

Lack of Cash Component

20% allocation needed as cash to:

- **Support the distribution of supplies**
- **Facilitate the installation of equipment**
- **Maintain existing systems**
- **Train staff, develop and sustain MIS**
- **Engage consultants and contractors**

Constraints: Lack of Cash Component

Cash for rehabilitation

- **Providing some Cash - UNICEF, CARE & ICRC**
- **UNICEF Catalytic/Partial rehabilitation -
1997-2001:**
 - ☒ **28 Water Treatment Plants**
 - ☒ **2 Sewerage Treatment Plants**
 - ☒ **13 Compact Water Treatment Units**
- **UNICEF cash assistance to date is only
US\$ 2,500,000, equivalent to 0.22% of the total cash
required)**

Constraints:

Lack of Cash Component

Cash for capacity building

- **UNICEF provided computers and training;**
- **Supports under its regular programme development of MIS and;**
- **Conducted a national sector survey and a comprehensive sector review.**

Cash Component Lessons Learned: Northern Iraq

- Dramatic rise in access to water and sanitation**
- Shift from emergency to rehabilitation and to service expansion**

Immediate Requirements:

WatSan sector South/Center Iraq

- **Given the effective end-use observation system in place, relax 'hold' criteria**
- **Give serious consideration to WatSan priority list**
- **Abolish or critically review chlorine observation procedure**

Immediate Requirements:

Watsan sector South/Center Iraq

- **Revisit all possible options to implement a cash component**
- **Review holds in the electricity sector**

ANNEX

Priority Contracts to be released from
“hold”

Contracts on hold - Priority

Sector/Category	DESCRIPTION & IMPACT OF HOLD	COMM. NUMBER	VALUE
Mech & Electrical parts	<p>Equipment for Balad, Nasseriya, & Basra sewage treatment plant, that were all started in mid-80s, and left uncompleted. Release of hold will benefit approximately one Million population.</p>	7015841 & 701586 & 701973	25M
	<p>Electrochemical equipment for 200 compact units for the rural areas whose current access to portable water is only 45%</p>	800822	17.6M
	<p>For Rawa water treatment plant which provides water for 15,000 population. This treatment plant urgently needs rehabilitation.</p>	700712	3.3M
	<p>Sewage pumps, water pumps & borehole pumps. These are indispensable items for the sector.</p>	50123,601616, 601659,801836	3.4M
	<p>Pipes fittings and hoses. Needed for rehabilitating the networks , required to increase the per capita share of water.</p>	601797,700798, 702284,802259	35.65M
	GRAND TOTAL		84.9M

Contracts on hold - Priority

Sector/Category	DESCRIPTION & IMPACT OF HOLD	COMM. NUMBER	VALUE
Sanitation	<p>These are CUs, Baghdad and other cities to prevent sewage-flooded streets.</p> <p>Sewage cleaning equipment for emptying drains and garbage collection for improving solid waste sanitation all over 15S/C.</p> <p>GRAND TOTAL</p>	<p>801043, 801207, 801209, 901014, 702540, 702541 901014</p> <p>601876,702676, 800882,803516, 901068,901069 802516</p>	<p>70M</p> <p>10.7M</p> <p>80.7M</p>

Contracts on hold - Priority

Sector/Category	DESCRIPTION & IMPACT OF HOLD	COMM. NUMBER	VALUE
Water	<p>Compact units for use in rural areas, which currently has only 45% access to potable water, up to 30% of the total population affected.</p> <p>These are urgently needed water treatment plants.(?)</p> <p>Water tankers for rural areas to serve the underserved and arid areas, such as Thiqar, Salaheddin, Anbar, kerbala, Wasit and Nineveh</p> <p>Laboratory equipment, for monitoring water quality. Even the contracts on holds are not enough to meet the need of about 60 Watson laboratories in the country.</p> <p>Chemical dosers, chemicals, and breathing apparatus. These are required for the treatment of potable water and for safety measures, which the sector is grossly lacking in. Health of observers and workers are in jeopardy.</p> <p>Drilling rigs, very crucial for water supply in areas that depend on ground water such as Tameen and Nineveh governorates.</p>	<p>600769, 701836, 701359.</p> <p>701357, 802579, 801920.</p> <p>600832, 701748 800909,800957, 901067.</p> <p>601194, 701839</p> <p>A total of 20 Comm nos. on hold from phase 6-9.</p> <p>701057</p>	<p>18M</p> <p>16M</p> <p>30M</p> <p>.67M</p> <p>22.5M</p> <p>12M.</p>
GRAND TOTAL			

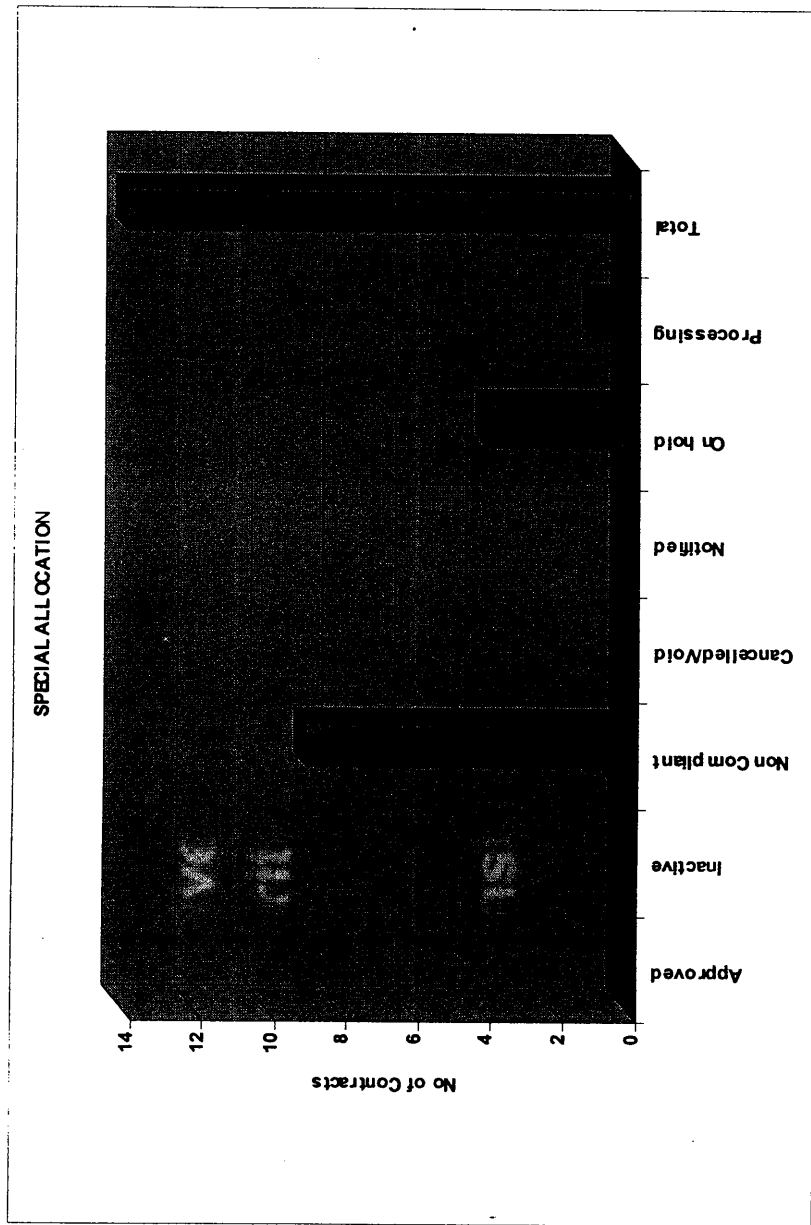
Contracts on hold - Priority

Sector/Category	DESCRIPTION & IMPACT OF HOLD	COMM. NUMBER	VALUE
Power	Diesel generating sets to boost water production at CUs. Present power outages of 14hrs /day wipes out benefit of installed MoU supplies.	802072, 802321, 802571, 802719 901077	13.4
Computers	GRAND TOTAL Needed for management of information of large arrivals of MoU supplies. Presently lack of it is hindering tracking of MoU supplies. Note that UNICEF has and is providing computers & training at governorate level.	701950, 801873, 601848	7.3M
Warehouses	GRAND TOTAL Low loaders & cranes for handling MoU supplies at warehouses and installing supplies in the field. Cranes are used for lifting pipes for installation of pipe network. Release of goods will facilitate distribution & installation of MoU supplies to end-users.	50932 901387,901154 , 901150	32M
	GRAND TOTAL		32M

Contracts on hold - Priority

Sector/Category	DESCRIPTION & IMPACT OF HOLD	COMM. NUMBER	VALUE
	Electromechanical Parts	901060	8,097,306.51
	Water tankers	901067	4,828,620.4
	Garbage Trucks	901068	5,567,694
	<p>All items on special allocation in the "OK Info list" and in the "1051 list" should be released due to the acknowledged nature of the needs of the class(poorest of the poor) that they are supposed to address in Baghdad and in the 15 governorates in the S/C.</p>		20M
	GRAND TOTAL		

Analysis of Contracts on holds



& Analysis of special Allocation