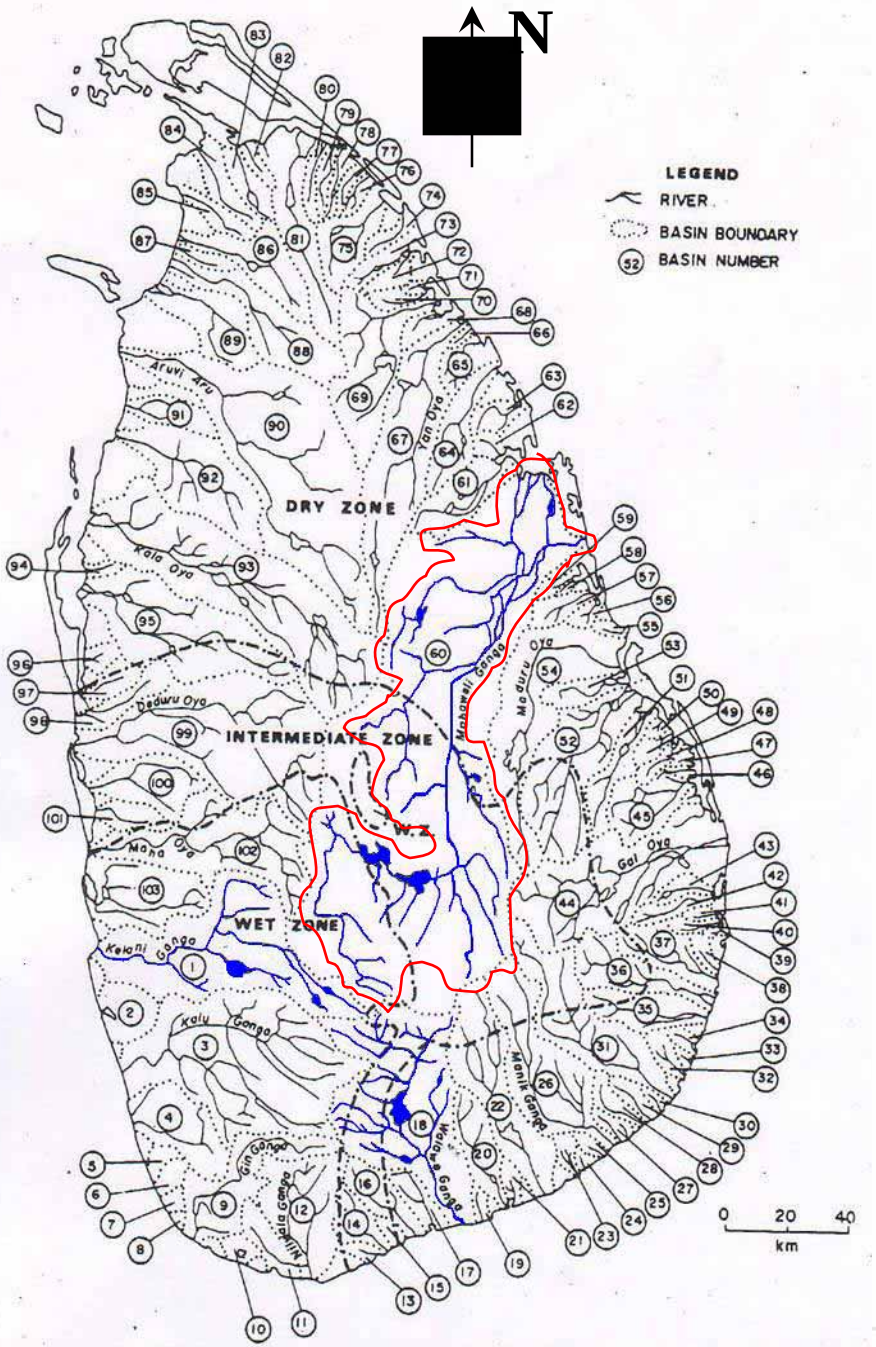
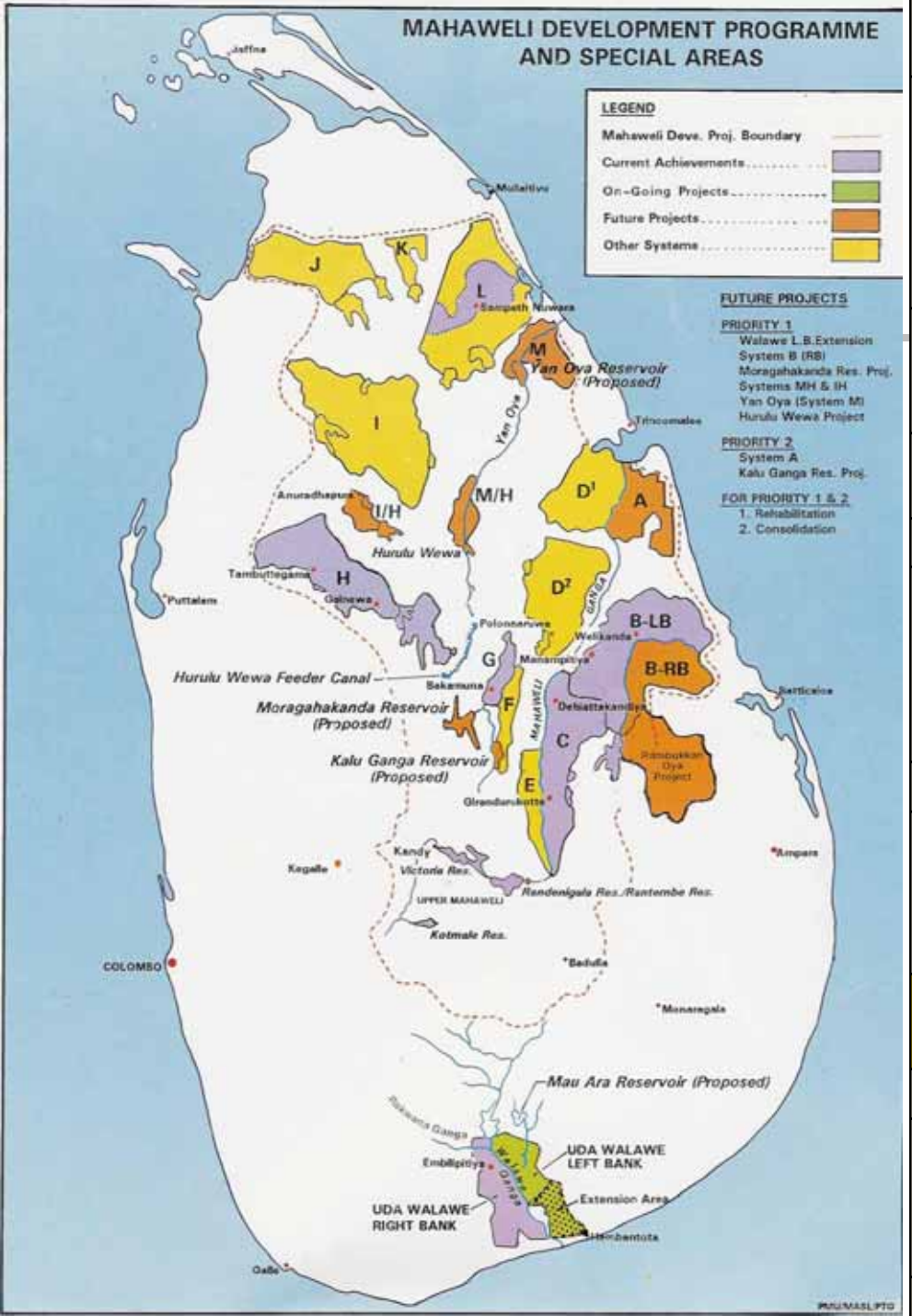
Mahaweli Development Project in Sri Lanka

Presented by
Eng.K. Wijerathne

Mahaweli River Basin



Basin No	Name of Basin	Catchment Area Sq. Km.	Basin No.	Name of Basin	Catchment Area Sq. Km
1.	Kelani Ganga	2278	53.	Miyangolla Ela	225
2.	Bolgoda Lake	374	54.	Maduru Oya	1541
3.	Kaluganga	2688	55.	Pulliyanpotha Aru	52
4.	Bentota Ganga	6622	56.	Kirimechi Odai	77
5.	Madu Ganga	59	57.	Bodigoda Aru	164
6.	Madampe Lake	90	58.	Mandan Aru	13
7.	Telwatte Ganga	51	59.	Makarachchi Aru	37
8.	Ratgama Lake	10	60.	Mahaweli Ganga	10327
9.	Gin Ganga	992	61.	Kantalai Basin Per Aru	445
10.	Koggala Lake	64	62.	Panna Oya	69
11.	Powatta Ganga	233	63.	Palampotta Aru	143
12.	Nilwala Ganga	960	64.	Pankulam Ara	382
13.	Sinimodara Oya	38	65.	Kanchikamban Aru	205
14.	Kirama Oya	223	66.	Palakutti Aru	20
15.	Rekawa Oya	755	67.	Yan Oya	1520
16.	Uruhokke Oya	348	68.	Mee Oya	90
17.	Kachigala Ara	220	69.	Ma Oya	1024
18.	Walawe Ganga	2244	70.	Churian Aru	74
19.	Karagan Oya	58	71.	Chavar Aru	31
20.	Malala Oya	399	72.	Palladi Aru	61
21.	Embilikala Oya	59	73.	Nay Ara	187
22.	Kirindi Oya	1165	74.	Kodalikallu Aru	74
23.	Bambawe Ara	79	75.	Per Ara	374
24.	Mahasilawa Oya	13	76.	Pali Aru	84
25.	Butawa Oya	38	77.	Muruthapilly Aru	41
26.	Menik Ganga	1272	78.	Thoravil Aru	90
27.	Katupila Aru	86	79.	Piramenthal Aru	82
28.	Kuranda Ara	131	80.	Nethali Aru	120
29.	Namadagas Ara	46	81.	Kanakarayan Aru	986
30.	Karambe Ara	46	82.	Kalawalappu Aru	56
31.	Kumbukkan Oya	1218	83.	Akkarayan Aru	192
32.	Bagura Oya	92	84.	Mendekal Aru	297
33.	Girikula Oya	15	85.	Pallarayan Kadu	159
34.	Helawa Ara	51	86.	Pali Aru	451
35.	Wila Ara	484	87.	Chappi Aru	66
36.	Heda Oya	604	88.	Parangi Aru	832
37.	Karanda Oya	422	89.	Nay Aru	560
38.	Simena Ara	51	90.	Malvatu Oya	3246
39.	Tandiadi Aru	22	91.	Kal Ara	210
40.	Kangikadichi Ara	56	92.	Moderagam Ara	932
41.	Rufus Kulam	35	93.	Kala Oya	2772
42.	Pannel Oya	184	94.	Moongil Aru	44
43.	Ambalam Oya	115	95.	Mi Oya	1516
44.	Gal Oya	1792	96.	Madurankuli Aru	62
45.	Andella Oya	522	97.	Kalagamuwa Oya	151
46.	Thumpankeni Tank	9	98.	Pantampola Oya	215
47.	Namakada Aru	12	99.	Deduru Oya	2616
48.	Mandipattu Aru	100	100.	Karambala Oya	589
49.	Pattanthe Aru	100	101.	Ratmal Oya	215
50.	Magalawatavan Aru	346	102.	Maha Oya	1510
51.	Vett Aru	26	103.	Attanagalu Oya	727
52.	Mundeni Aru	1280			



System	Project	Irrigable Area (ha)	Institute
H	Dambulu Oya	2,225	MASL
	Kandalama	4,500	MASL
	Kalawewa RB	13,965	MASL
	Kalawewa Yoda Ela	4,720	MASL
	Kalawewa LB	6,000	MASL
	Rajanganaya	7,123	ID
I/H	Nachchaduwa	2,540	ID
	Nuwara wewa	970	ID
	Tisa wewa	520	ID
M/H	Hurulu wewa	4,210	ID
	Hurulu wewa canal	2,250	MASL
G	Elahera	5,400	MASL
D	Girithale	3,075	ID
	Minneriya	8,900	ID
	Kawdulla	5,060	ID
	Kantale	6,782	ID
	Parakrama Samudra	10,420	ID
E	Hasalaka	7,750	ID
C	Sorabora	810	ID
	Mapakada	550	ID
	Dambarawa	610	ID
	Ulhitiya/Ratkinda	21,700	MASL
B	**Maduruoya**	**16,500**	**MASL**
	Wakaneri	**3,500**	**ID**
A	Alleya	7,050	ID
Walawa	Walawa RB	12,300	MASL
	Walawa LB	6,110	MASL
	Liyangastota	6,800	ID
	Kaltota	940	ID
Total		**173,280**	

MASL – Mahaweli Authority of Sri Lanka ID – Department of Irrigation

MAHAWELI SYSTEMS

- System B
- System C
- System G
- System H
- Uda walawe
- System L
- Victoria/ Kotmale
- Huruluwewa
- System D

Objectives of Mahaweli Development Project

- Alienation of land among landless people
- Resettlement process
- Agriculture expansion and increase of income generation
- Generation of employment opportunities
- Hydro power Generation


MAHAWELI SYSTEM
“B”

Basic Features of System ‘B’

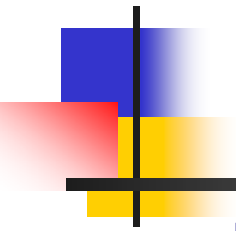
- Population – 115,000
- Extent of Land – 114,650 ha
- No of Villages - 106
- No of Farm Organizations – 118
- No of small Tanks – 69
- Agriculture based Economy
- Climate - Tropical
  - Avg. Temperature around 32^{o}C


MADURU OYA DAM
Rock fill Dam with Earth Core
Height - 41 m
Length -1090 m
Catchment Area 453 km2
Gross Storage 597 MCM

Main features in Maduruoya scheme

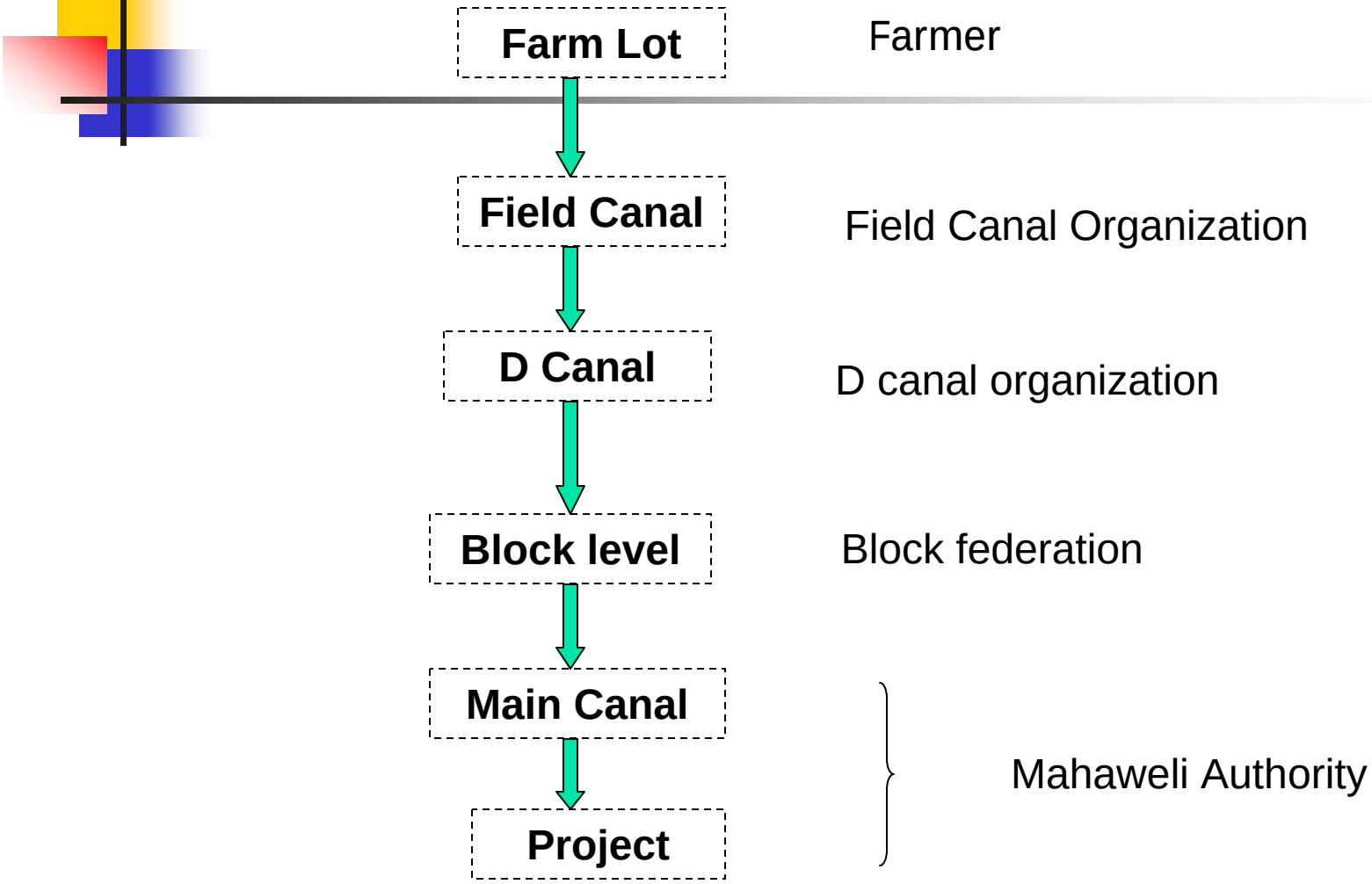
- Location: Polonnaruwa district,Welikanda & Dimbulagala D.S divisions.
  225km away from Colombo.
- Catchments Area: 453 km^2
- Gross storage: 597 MCM
- Dead storage: 120 MCM
- Full supply level: 89.00 m
- Length of dam: 1,090 m
- Irrigable Area: 42,000 ha

- Canal length:
  Main and Branch 110 km
  Distributory and Field 1760 km



How IWRM concept is implemented in System ‘B’

Responsibilities at each level for water issues



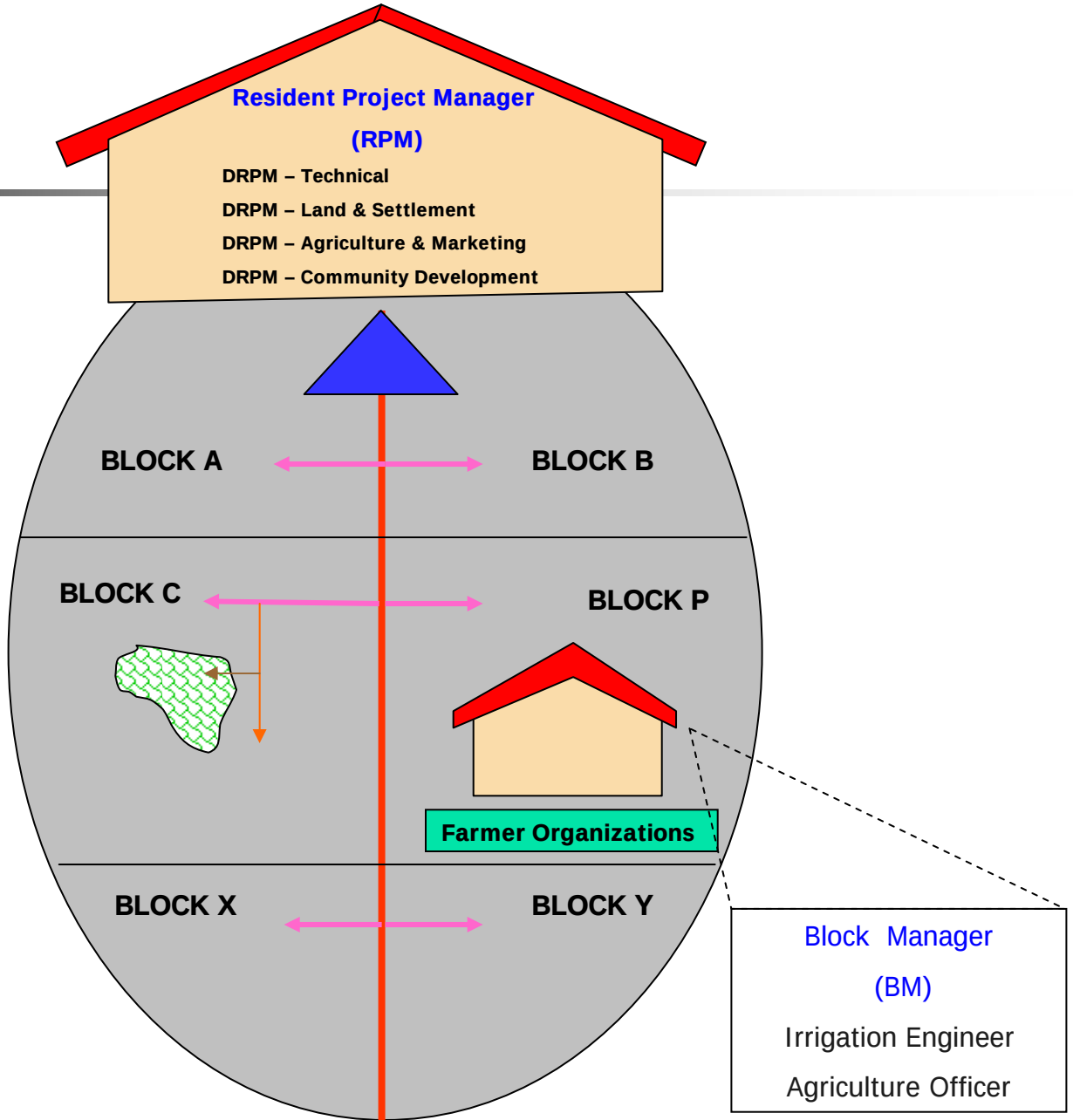
Involvement of Farmers for water management

- Field canal farmer organization (10-15) farmers
  - A field canal leader is responsible for organizing the rotational water issues and scheduling within the field canal.
- Distributory Canal Farmer Organization (100-150) farmers
  - preparation of the Seasonal Allocation Plan
  - deciding on the water allocation a DCFO
  - water distribution and monitoring within the D-canal (water master)
  - keeping records of water issues to each canal
  - maintaining the notice board at the Distributory canal head to make aware of the water schedule.

Involvement of Farmers for water management Cont..

- Block Level Farmer Federation (4000-5000 farmers)
  - constitute of the members of the DCFOs.
  - responsible in allocating water among the D-Canals

Organizational Structure of Mahaweli System 'B'



Preparation of seasonal plan

- **Pre Cultivation Meeting**
- **Water Panel Meeting**
- **Cultivation Meeting**

Pre Cultivation Meeting

Participants

Irrigation Engineers
Agriculture Officers
Farmer Organizations

} From every Block

Discussed on

- Water availability
- Crop types
- Crop extents
- Rough estimate on water requirement
- Repair & Maintenance works of canals

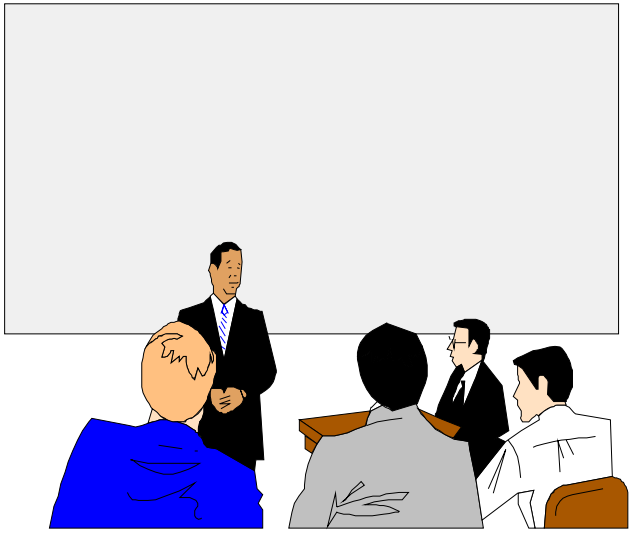
Water Panel Meeting

Participants

Hon Minister

Secretary of Mahaweli Ministry
DG (MASL)
All RPMs
Director (Headworks)
All Engineer In Charge
DGM CEB (Mahaweli Complex)
DG & Director of Irrigation Department
Farmer Organizations

MASL



Discussed on

- Availability of water
- Crop types, periods and extent
- Water allocations for different sectors

Cultivation Meeting (Final)

Participants

RPM

DRPMs
Irrigation Engineers
Agriculture Officers

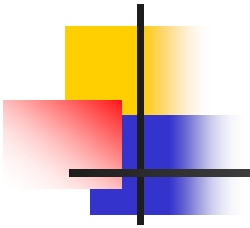
Farmer Organizations

From every Block

Other all relevant state institution

Confirm or adjust

- **Crop types**
- **Crop periods**
- **Crop extents**



Thank You