

#### සටහන

මුල් පිටපත ඉංග්‍රීසි භාෂාවෙන් සකස් කර සිංහල/දෙමළ භාෂා වලට පරිවර්තනය කර ඇති බැවින් වචන වල යම් නොගැලපීමක් ඇති විට ඉංග්‍රීසි පිටපත නිවැරදි ලෙස සැලකිය යුතුය.

#### Note

Since original document prepared in English and translated to Sinhala/Tamil, in any discrepancy in words, English version shall be considered as correct.

#### குறிப்பு

මූල ආවණම ආභ්‍යංගික මොඞ්‍රියිල ත්‍යාරිකකප්පටු ජිභ්‍යංගි / තමිඞ් ආකි‍ය මොඞ්‍රිකභ්‍යංගික මොඞ්‍රි පෙ‍යර්කකප්පට්‍යාල් මොඞ්‍රි පෙ‍යර්ප්පිල් භ්‍යාඞ්‍යතොරු මුරණ්‍යාඞ්‍රු කාණ්‍යප්පට්‍යාල් ආභ්‍යංගිකප් පිරති ජාරි‍යාඞ්‍යතෙඞ් කරුතප්‍පටුම

## **Message from the Secretary**

I am happy to present the Performance Report of the Ministry of Irrigation and Water Resources Management for the year 2011, having forged ahead to fulfill the mission and objectives of the Ministry, in the subjects and functions pertaining to the irrigation and water sub sectors. The year under review was eventful and we were able to take many progressive steps that will steer this sector to be more productive to serve the nation in the coming years.

The capital investment programme of the Ministry had a workload of approximately Rs 20,000 million. This was a heavy development programme. We were on the path to achieve good progress, in spite of floods occurred in the beginning of the year and other constraints that had to be overcome during implementation. Steps were taken to remedy constraints such as staff shortages that existed, by new recruitments to the certain skilled technical grades but the shortage still prevails by large especially in the grades of Engineers, Engineering Assistants and other technical categories, which is being addressed by way of restructuring institutions, reviewing schemes of recruitments etc.

As regards achievements this year, the Pro Poor Economic development And Community Enhancement (PEACE) project which benefits 25,000 families has almost completed and extended to undertake some additional works, hence the project will be fully completed at the end of 2012 (AK component). Deduru Oya project in the NWP is about 66 % completed at the end of 2011, including construction of LB main canal and planned to provide irrigation to LB area in end of 2012, and in the East, Rambukkan Oya Reservoir project , 80 % of the works have been substantially completed and scheduled to be completed in 2012. Other medium size projects giving direct benefits to rural communities have progressed well. In the Uma Oya project most of the investigations and design of main component are almost completed and some preliminary works like access roads have been completed. Work on access tunnel has already commenced and the construction of main tunnel will be commenced in mid 2012 according to the programme. Preparatory work in planning downstream development has achieved a good progress.

Construction of infrastructure in the downstream development areas and resettlement related activities under Moragahakanda - Kaluganga project has shown good progress in 2011 and construction works of necessary infrastructure for resettlement are progressing smoothly. Procurement process for selection of contractors for Headwork of Kaluganga Reservoir is in progress, and an MOU has been signed with a Chinese company to submit proposals for construction of Headworks of Moragakanda Reservoir.

The Ministry and its organizations have given special attention on implementation of development projects in Mannar and Vavunia districts including Giants Tank, Akathimuruppu, Pavatkulam tank, Viyadikulam and Mahaweli system L. The Ministry and its partners will actively take part in these

projects in future as well. The Water Resources Board and Central Engineering Consultancy Bureau, the two main institutions attached to the ministry have engaged in cleaning of dug wells and production of tube wells in Kilinochchi and Mulativu districts and providing related infrastructure for resettlements of displaced people in the North and East.

Mahaweli Consolidation Project and Maduru Oya LB Project are progressing as scheduled. Preliminary planning for development of Maduru oya Right Bank (RB) area has begun and construction of RB canal and development of new lands in Baticaloa District will be commenced in 2012. Agricultural productivity initiative in Mahaweli Systems and items of works undertaken by the irrigation management division of the Ministry are directed towards empowerment of the farmers, crop diversity and poverty alleviation.

The Ministry with its implementing organizations is satisfied about the performance achieved in year 2011. It is indeed a pleasure that we were able to get the approval of cabinet Ministers to implement 10-year development programme for the sector, which consists of completion of 39 projects during the period of 2012 to 2021. We hope a better performance in Capital Investment Programme in year 2012, which is based on this 10 Year Investment Programme, assuring the betterment of the farming community in the whole country.

**Eng. K.W. Ivan de Silva**

Secretary,  
Ministry of Irrigation and Water Resources Management

# Content

	Page
1. Vision	1
2. Mission	1
3. Main functions of the Ministry	1
4. Challenges	2
5. Actual against the forecast in relation expenditure under Ministry head 152 & ID head 282	3
6. Projects and Programmes Directly Under the Ministry and Progress	
a. Performance of Irrigation Management Division	14
b. Performance of Pro Poor Economic Advancement and Community Enhancement (PEACE) Project	29
c. Uma Oya Multipurpose Development Project (UOMDP)	36
7. Implementing Agencies and Progress of Projects / Programmes – 2012	
a. Irrigation Department	39
b. Mahaweli Authority of Sri Lanka	56
c. Water Resources Board	74
d. Central Engineering Consultancy Bureau	81
8. Ministry Involvement in North Development in 2011	86
9. Performance of projects in pipeline 2011	87

# **Ministry of Irrigation and Water Resources Management**

## **1. Vision**

Prosperous Sri Lanka through Water and Irrigation Heritage .....

## **2. Mission**

Providing wellbeing of community while fulfilling all water needs through Water Resources Management

## **3. The Main Functions of the Ministry**

- 1 Formulation of policies and implementation of Projects and Programmes
- 2 Fulfilling obligations under “Mahinda Chinthana – Vision for the Future”
- 3 Promotion, construction, operation, maintenance and management of Irrigation systems, Rainwater harvesting, and Ground water resources development
- 4 Salt water exclusion programmes
- 5 Drainage and Flood protection
- 6 Prevention of the pollution of rivers, streams, reservoirs and other water bodies
- 7 Engineering consultancy services and construction
- 8 Implementation of legislative enactments relevant to the subjects and Institutions under the Ministry.

## **4. Challenges**

- 1 Improving the efficiencies of existing irrigation systems.
  - Increase water productivity
  - Increase cropping intensity
  - Efficient management
  - System modernization and adaptation of new technologies
  - Participatory management
  - Crop diversification
  - Upper catchment management
  - Increasing farmer income through income generating activities.
- 2 Contribution for domestic water needs and environment protection work of existing schemes
- 3 Supply of water for water deficit areas.
  - By improving the existing schemes
  - By new projects
- 4 Conservation of sources of surface and ground water resources.
- 5 Fulfill domestic, industrial and other water demands.
- 6 Presentation of a national plan to meet future water demands of coming generations
- 7 Strengthening human resources and institutional affairs.

**5. Actual against the forecast in relation to expenditure under Ministry head 152 & ID head 282**

Form A Appropriation Account

Form B Revenue Account

Form C Advanced Accounts

Form D Fund Account

CATEGORY : APROPRIATION ACCOUNT 152												Form - A
	Financial Performance (Rs.In '000)					Physical Performance						
Description	Current Year 2011		Previous Year Actual 2010	Variation Over		Output (Service/Goods)		Current Year's Output		Previous Years output	Variation Over	
	Budgeted	Actual		Budget	Previous Year Actual	Type / Class	Measure	Targeted	Actual		Targeted	Previous Year's Actual
<b>Programme Title and No.</b>												
Operational Activities 01												
<b>Project Title and No:</b>												
Minister office 01												
Expenditure												
Recurrent Expenditure												
Personnel Emoluments	17,082	15863	14,505									
Other Recurrent	25,429	24,600	21,929									
<b>Project Title and No:</b>												
Administration & Establishment Services 02												
Expenditure												
Recurrent Expenditure												
Personnel Emoluments	29,190	28,873	20,369									
Other Recurrent	9,519	9,476	7,646									

<b>Programme Title and No.</b>												
Development Activities 02												
<b>Project Title and No:</b>												
Inter provincial irrigation Development Programmes 03												
Expenditure												
Recurrent Expenditure												
Personnel Emoluments	47,200	46,779	42,620									
Other Recurrent	7,405	6,410	6,140									
<b>Project Title and No:</b>												
Irrigation Institutions & Development Programmes 04												
Expenditure												
Recurrent Expenditure												
Personnel Emoluments	0	0	0									
Other Recurrent	1,865,000	1,844,300	1,795,000									
<b>Total</b>	<b>2,000,825</b>	<b>1,976,301</b>	<b>1,908,209</b>									
<b>Capital Expenditure</b>												
Operational Activities 01												
Minister office 01	14,829	14,552	14,168									
Administration & Establishment Services 02	7,600	7,325	7,922									
Development Activities 02												
Inter provincial irrigation Development Programmes 03	8,409,296	5,573,008	2,010,604									
Development programme of irrigation institutions 04	1,260,000	645,736	649,097									
Mahaweli Irrigation Development Programmes 05	5,107,544	3,105,224	2,274,537									
<b>Total Expenditure</b>	<b>16,800,094</b>	<b>11,322,146</b>	<b>6,864,537</b>									

CATEGORY : REVENUE ACCOUNTS								152								Form -B							
Description	Financial Performance (Rs.In '000)										Physical Performance												
	Arears of Revenue As At 01.01.2011	Current Year		Previous Year Actual	Variation Over		Arears of Revenue As At 31.12.2011	Output (Service /Goods)		Current Year's Output		Previous Years output	Variation Over										
		Budgeted	Actual		Budget	Previous Year Actual		Type/ Class	Measure	Targeted	Actual		Targeted	Previous Years Actual									
Revenue Codes																							
20.02.01.01		350	681	247	331	(103)																	
20.02.02.99		1000	1189	939	189	(61)																	
20.03.99.00		1000	4602	6718	3602	5718																	
Total Revenue		2350	6472	7904	4122	5,554.00																	

CATEGORY : ADVANCE ACCOUNTS 152						Form -C						
Description	Financial Performance (Rs.In '000)					Physical Performance						
	Current Year		Previous Year Actual	Variation Over		Output (Service/Goods)		Current Year's Output		Previous Years output	Variation Over	
	Prescribed	Actual		Prescribed	Previous Year Actual	Type/Class	Measure	Targeted	Actual		Targeted	Previous Years Actual
Type:												
Account Title & No:												
Advances to Public Officers 152011												
Maximum Expenditure Limit	8635	7903										
Minimum Receipt Limit	5000	6811										
Maximum Debit Limit	34000	31076										
Maximum Liability												
Financial Results												

CATEGORY : APPROPRIATION ACCOUNT 282						FORM : A						
DESCRIPTION	Financial Performance (Rs, in'000')					Physical Performance						
	Current Year		Previous Year Actual	Variations Over		Output Service/Goods		Current Years Output		Previous Year Output	Variations over	
	Budgeted	Actual		Budgeted	Previous Year Actual	Type/ Class	Measure	Targeted	Actual		Targeted	Previous Year Actual
Programme 01- Operational Activities												
Project 01 - Administration & Establishment Services												
Expenditure												
Recurrent Expenditure												
Personal Emoluments	257,840	243,770	226,383	14,070	17,387		%	100	94.54	90.73	5.46	3.81
Other Recurrent	49,005	45,781	43,728	3,224	2,053		%	100	93.42	92.74	6.58	0.68
<b>Total</b>	306,845	289,551	270,111	17,294	19,440							
Capital Expenditure												
2001	27,000	26,216	25,301	784	915	(a)	%	100	97.10	100.00	2.90	-2.90
2002	400	390	168	10	222	(b)	%	100	97.50	56.00	2.50	41.50
2003	3,500	2,475	1,492	1,025	983	(c)	%	100	70.71	87.82	29.29	-17.11
2102	5,500	4,748	1,967	752	2,781	(d)	%	100	86.33	39.34	13.67	46.99
2104						(e)						
2401	1,200	869	999	331	-130	(f)	%	100	72.42	99.90	27.58	-27.48
<b>Total</b>	37,600	34,698	29,927	2,902	4,771							

(a) Rehabilitation &amp; Improvements of Building &amp; structures

(d) Acquisition of Furniture &amp; office equipment

(b) Rehabilitation &amp; Improvements of Plant Machinery &amp; Equipment

(e) Acquisition of Building &amp; structures

(c) Rehabilitation &amp; Improvements of Vehicles

(f) Training &amp; capacity Building

CATEGORY : APPROPRIATION ACCOUNT						FORM : A						
DESCRIPTION	Financial Performance ( Rs, in'000')					Physical Performance						
	Current Year		Previous Year Actual	Variations Over		Output Service/Goods		Current Year Output		Previous Year Output	Variations over	
	Budgeted	Actual		Budgeted	Previous Year Actual	Type/ Class	Measure	Targeted	Actual		Targeted	Previous Year's Actual
Programme 02- Development Activities												
Project 02 - Administration & Maintenance of Irrigation Schemes												
Expenditure												
Recurrent Expenditure												
Personal Emoluments	871,120	861,085	788,951	10,035	72,134			100	98.85	94.18	1.15	4.67
Other Recurrent	76,160	71,987	67,431	4,173	4,556			100	94.52	93.33	5.48	1.19
<b>Total</b>	947,280	933,072	856,382	14,208	76,690							
Capital Expenditure												
2001	1,702,670	1,672,220	872,687	30,450	799,533	(a)	%	100	98.21	87.56	1.79	10.65
2002	50,000	45,651	14,931	4,349	30,720	(b)	%	100	91.30	49.77	8.70	41.53
2003	30,000	27,977	37,689	2,023	-9,712	(c)	%	100	93.26	83.75	6.74	9.51
2101	0	0	27,608	0	-27,608	(d)	%	100	0.00	98.60	100.00	-98.60
2102	15,000	14,790	4,556	210	10,234	(e)	%	100	98.60	30.37	1.40	68.23
2103	280,000	196,991	197,496	83,009	-505	(f)	%	100	70.35	98.75	29.65	-28.40
2104	15,000	11,282	7,974	3,718	3,308	(g)	%	100	75.21	79.74	24.79	-4.53
2502	140,000	130,585	63,668	9,415	66,917	(h)	%	100	93.28	62.82	6.73	30.46
<b>Total Expenditure</b>	2,232,670	2,099,496	1,226,609	133,174	872,887							

(a) Rehabilitation &amp; Improvements of Building &amp; Structures

(b) Rep. to plant machinery &amp; equipment

(c) Repairs to vehicles

(d) Administration &amp; Maintenance of Irrigation Schemes

(e) Acquisition of Furniture &amp; office equipment

(f) Acquisition of plant machinery &amp; equipment

(g) Acquisition of Building &amp; structure

(h) Other capital expenditure

APPROPRIATION ACCOUNT						FORM : A						
DESCRIPTION	Financial Performance ( Rs, in'000')					Physical Performance						
	Current Year		Previous Year Actual	Variations Over		Output Service/Goods		Current Years Output		Previous Year Output	Variations over	
	Budgeted	Actual		Budgeted	Previous Year Actual	Type/ Class	Measure	Targeted	Actual		Targeted	Previous Year's Actual
Programme 02- Deveopment Activities												
Project 04 - Medium Irrigation schemes												
Expenditure												
Recurrent Expenditure												
Personal Emoluments	-	-	-	-	-							
Other Recurrent	-	-	-	-	-							
Total	-	-	-	-	-							
Capital Expenditure												
2105	365,310	194,832	156,756	170,478	38,076	(a)	%	100	53.33	45.75	46.67	7.58
Total Expenditure	365,310	194,832	156,756	170,478	38,076							

(a) Medium Irrigation Scheme

CATEGORY : APPROPRIATION ACCOUNT						FORM : A						
DESCRIPTION	Financial Performance ( Rs, in'000')					Physical Performance						
	Current Year		Previous Year Actual	Variations Over		Output Service/Goods		Current Years Output		Previous Year Output	Variations over	
	Budgeted	Actual		Budgeted	Previous Year Actual	Type/ Class	Measure	Targeted	Actual		Targeted	Previous Year's Actual
Programme 02- Development Activities												
Project 03 - Major Irrigation schemes												
Expenditure												
Recurrent Expenditure												
Personnel Emoluments												
Other Recurrent												
<b>Total</b>												
Capital Expenditure												
2105	4,085,850	2,905,570	2,170,866	1,180,280	734,704	(a)	%	100	71.11	74.31	28.89	-3.20
<b>Total Expenditure</b>	4,085,850	2,905,570	2,170,866	1,180,280	734,704							

(a) Major Irrigation Scheme

CATEGORY : REVENUE ACCOUNTS															Form B
Head :		282													
Description		Financial performance Rs.,000						Physical Performance							
	Arrears of Revenue As at 01.01.2010	Current Year		Previous Years Actual	Variation Over		Arrears of Revenue As at 31.12 .2010	Out Put ( Service/ Goods)		Current Year Output		Previous Year Actual	Variation Over		
		Budgeted	Actual		Budget	Previous Years Actual		Type/Class	Measure	Targeted	Actual		Targeted	Previous Year Actual	
<u>Revenue Codes</u>															
20.02.01.01 Rent on Government Buildings		-	7,600	8,154	6,928	554	1,226	-							
20.02.02.99 Interest - Other		-	15,000	14,329	15,004	(671)	(675)	-							
20.03.99.00 Other Receipts		-	30,000	36,155	19,223	6,155	16,932	-							
Total Revenue			52,600	58,638	41,155	6,038	17,483	-							

## ADVANCE ACCOUNT 282

## FORM C

DESCRIPTION : Public Officer's Advance Account	Financial Performance ( Rs, in'000')					Physical Performance						
	Current Year		Previous Year Actual	Variations Over		Output Service/Goods		Current Years Output		Previous Year Out put Actual	Variations over	
	Prescribe	Actual		Prescribe	Previous Year Actual	Type/ Class	Measure	Targeted	Actual		Targeted	Previous Year Actual
Type												
Account Tile & No. 282011												
Maximum expenditure Limit	141,300	131,073	140,369	10,227	-9,296		%	100	93	85.00	7	8
Minimum Receipt Limit	103,000	134,557	113,905	-31,557	20,652		%	100	130.64	106.95	-30.64	23.69
Maximum Debit Limit	480,000	395,572	399,056	84,428	-3,484		%	100	82.41	88.68	17.59	-6.27
Maximum Liability												
Financial results												

## **6. Projects and Programmes Directly under the Ministry and Performance**

- a. Performance of Irrigation Management Division (IMD)
- b. Performance of Pro Poor Economic Advancement & Community Enhancement (PEACE) Project
- c. Performance of Uma Oya Multipurpose Development Project (UOMDP)

### **a. Performance of Irrigation Management Division (IMD)**

#### **Vision**

"Prosperous farming community in major irrigation areas"

#### **Mission**

"Increase agricultural productivity and production through organized farming community and well-coordinated provision of inputs and services".

#### **Objectives**

- i. Maximizing economic gains from a unit of irrigation water and unit of land.
- ii. Facilitate rational and equitable distribution of water among beneficiary farmers.
- iii. Enhance the community institutional development process through establishing and strengthening community organizations to increase the farmer participation for irrigation related resources management.
- iv. Facilitate the sub irrigation system operation and maintenance processes for optimal performance
- v. Increase agricultural productivity through improved coordination among beneficiaries, state agencies and private entities for input and service provision.
- vi. Establish positive attitudes through enhancing knowledge and skills of Farmer community

- vii. Strengthening support services for agriculture, livestock, inland fishery etc.
- viii. Enhancing self - reliance and self - management capacity of farming community.
- ix. Enhance entrepreneurship of farmers by facilitating income generation activities on farming and non-farming enterprises

### Budget and Financial Performance for 2011

#### Capital Expenditure

Vote 152- 02 - 3 - 0	Allocation (Rs. '000)	Cumulative Expenditure end 2011 (Rs. '000)	Percentage	Remarks
<b>*2001-Rehabilitation &amp; Improvements of Capital Assets - Buildings &amp; Structures</b> Buildings	5,000	5,449	109	Excess Transferred from vote no. 152-2-6-2105 of MIWRM
<b>2002-Rehabilitation &amp; Improvements to Capital Assets</b> Plant, Machinery and Equipment	700	542	77	
<b>*2003-Rehabilitation &amp; Improvements to Capital Assets</b> Vehicles	6,200	7,567	122	-Do-
<b>2102-Acquisition of Capital Assets</b> Furniture & Office Equipment	600	407	68	
<b>*2105-Acquisition of Capital Assets</b> Land & Land improvement	14,300	14,951	104	-Do-
<b>*2401-Capacity Building</b> Training & Capacity Building	200	203	102	-Do-
<b>2401-Increasing the capacity of Integrated Management in Irrigated Agriculture in dry Zone (JICA) Capacity Building</b> Training & Capacity Building	500	111	22	
<b>Total</b>	<b>27,500</b>	<b>29,230</b>	<b>106</b>	

## Programmes and Physical Performance for 2011

### 1. Institutional Development

The institutional development process implemented by IMD is mainly focused on the establishment and strengthening of farmer organizations at DC level in major irrigation areas. The ideal FO should maintain honesty and integrity by adhering to desirable good governance practices such as accountability, responsibility and transparency (ART). The mechanisms to preserve these values are dynamic and therefore constant interactions and regular changes in approaches are necessary to maintain and improve them in order to keep them appreciated by the membership and the community. Therefore the IMD implements programs to keep the community and membership aware of the need to uphold such values, while imparting necessary skills to maintain the tools and mechanisms for the responsible community members to uphold and preserve these values. The following information indicates the subjects and efforts that are undertaken by the IMD to inculcate the values of ART for the FOs during 2011.

### Targets & Progress for 2011

No	Activities	Target	Progress	%	Observation
1	Updating of accounts No. FOs	749	745	99	
2	Preparation of final accounts - No. FOs	750	576	77	Shortage of officers in RPM offices results in difficulty to supervise.
3	Internal auditing - No. FOs	686	595	86	Reluctance of committee members, Complacency and apathy of members
4	External Auditing No. FOs	517	240	46	Inadequacy of qualified auditors in rural areas; exorbitant charges for auditing.
5	Conducting elections No. FOs	253	177	69	Lack of interest in FO Leaders; shortage of officers to supervise
6	Conducting Annual General Meetings No. FOs	1198	1,054	87	Lack of interest in FO members and greed of committee members to stay in the posts.
7	Monthly committee meetings - No. FOs	4211	3,469	82	Lack of staff in RPM offices reduces the opportunities to supervise

8	FO fund development - No. of FOs  - Rs ' 000	701  17,636	698  19,337	99  109	
9	Conducting Pre-Kanna meetings - No.	98	98	100	
10	Conducting Kanna meeting s- No.	116	116	100	
11	Conducting Project Management Committee meetings- No.	437	437	100	
12	Preparation of system and procedure for Farmer Organization	01	01	100	

The achievements are moderate to excellent which can be attributed to several reasons as denoted. Most of the items are dependent on the attitudes and values of the human resource with which the IMD officers are working. Bringing about changes in attitudes and values is a slow process where sociological aspects play a key role. Such changes can be effectively brought about through increased interactions with change agents. The under-achievement of most of the items are mainly due to the shortage of officers in IMD which resulted in difficulty to bring about the desirable changes even if the community were exposed to such needs through strong awareness programs.



FO General meeting - Vijaya FO  
Rajanganaya



Officers awareness program - Nuwarawewa



FC group awareness – Rajanganaya



FC group awareness – Nuwarawewa

### 3. Operation and Maintenance of Sub System

The following information indicates the appreciative efforts taken by IMD to convince the farmers to undertake these work and bear the costs on behalf of the government while also engaging in cultivation practices which contribute to the nation.

Activities	Unit	Targets	Progress	%	Observations
1.Preparation of annual Maintenance Plan for FO level	No. of FOs	626	233	37	Low progress due to lack of staff in RPM offices
2. Preparation of annual Maintenance Plan for Project Level	No.	44	11	25	Low progress due to lack of staff in RPM offices
3.Conducting of <i>Shramadana</i> campaigns	No. campaigns	882	691	78	
	Man Days	81,690	81,194	99	
4. Development of O & M fund	No. FOs	569	528	93	
	Rs.(000)	26,718	18,839	71	
5.Demarcation and acquisition of reservations	No. DCs	177	52	29	Reluctance of relevant state officers to actively involved in this
	No. FCs	300	247	82	
6.Establishment of Model Channels	No. DCs	96	52	54	Lack of resources
	No. FCs	208	134	64	
7.Maintenance of DCs by Farmer Organizations	Length (km)	3,396	1,625	48	Low progress due to insufficient allocation of funds
	Value(Rs.000)	19,138	15,543	81	

8.Maintenance of FCs by Farmer Organizations	Length (km)	5,376	3,909	73	Do
	Value(Rs.000)	27,693	20,194	73	
9.Improvement of structures by Farmer Organization	Value(Rs.000)	8,459	8,964	106	
10.Maintenance of Agriculture roads by Farmer Organization	Length (km)	880	195	22	Insufficient fund allocation
	Value(Rs.000)	8,501	3,943	46	
11.Maintenance and improvement of Drainage canals	Length(k.m.)	213	214	100	
	Value(Rs.000)	338	415	123	
12.*Organizing Cultural Activities related to farming	No.	923	166	18	Unrealistic targets.

\* Pirith sajjayana, deva puja, Aluth sahal mangalya,/fathiya reciting,, kiri ithiraweeme mangalya, mangala diyawara nikuth kireema, mutti nemeeme mangalya etc.

An innovative approach for O & M was experimented during 2011, for regular maintenance (RM) of subsystem under FOs authority. Initially it was promoted as an approach to preserve D & F canals rehabilitated under PEACE Project for long term sustenance.

**• Progress of implementing Regular Maintenance Program in schemes rehabilitated under PEACE Project**

Irrigations Scheme	O & M fund Collection Rs	No of Brush Cutters purchased	Length of distributory canals maintained Km	Length of FC canal maintained Km
Rajanganaya	6,320,000	59	68	368
Nachchaduwa	542,383	17	26	59
Nuwarawewa	985,000	12	20	10
Thisa wewa	28,452	6	5	11
Meeoya	1,125,000	29	17	21
Ridibedi Ela	1,365,300	23	30	55
Total	10,366,135	146	166	524

- **Progress of pilot implementation of RM Programme in other Irrigation schemes under IMD**

Item introduced		
Irrigation schemes started new RM approach	No	27
Brush Cutters purchased by FOs	No	39
Canal area ( side slopes )maintained by using brush cutters	m2	1,471,611
Length of canal Reservations demarcated and maintained	Km	239
Field canal gates replaced	No	53



Rajangana Ruhunu FO- effect of RM



Rajangana Samagi FO - effect of RM



Rajangan Ekamuthu FO - effect of RM cutters



Nuwarawewa - Trimming with Brush

### 3 Economic Development

The primary objective of irrigation management and related activities is to increase the Irrigation efficiency & productivity resulting in increased income of the beneficiaries from crops, livestock and aquaculture. While the basic commodity produced with irrigation is rice, there are various other crop commodities such as OFCs, banana, papaw, coconut, cashew, fodder grass etc. which are also cultivated with the irrigation supply or benefited with irrigated water in a major irrigation area. While the IMD implements programs to enhance the production and productivity of these commodities, the scope expands further to value addition of the primary product and also for market interventions through Forward Sales Contracts (FSCs). The following information shows the efforts taken by IMD to enable the beneficiaries to access such services.

- **Paddy production**

Paddy is the predominant crop cultivated during both *Maha* and *Yala* seasons in schemes managed by IMD. The total irrigable extent under INMAS approach is 165,340 ha. The Table below illustrates the total extent, production and value of paddy produced during 2011 under irrigation in INMAS schemes.

Season	Cultivated Extent-ha	Paddy Production Tons	Value Rs M (@ Rs.28/kg)
2010/11 Maha	153,667	564,841	15,800
2011 Yala	141,976	508,189	14,200
Year 2011	295,643	1,073,029	30,000

The total paddy production from INMAS schemes during 2011 was 1,073,029 tons from 295,643 ha which flowed to the market from paddy produced during 2010/11 *Maha* and during 2011 *yala*. The paddy extent was 9545 ha higher than the previous year. The total paddy production from INMAS scheme was around 29% of the national paddy production of 2011. The value of the total paddy production from INMAS Schemes amounted to approximately Rs Million 30,000 estimated at the price of Rs.28/- per Kg. offered by the government.

- **Cultivation of Other Field Crops (OFC)**

**Produce-to-market process**

In addition to paddy, other field crops were also promoted in water-short irrigations systems under INMAS approach to around 10,600 ha during 2011 *Yala* and 2010/11 *Maha* seasons through normal produce-to-market (PTM) process **where only the irrigation water was assured**. This brought an enhanced income to the farmers of around Rs. M. 1875.0 in 2011 estimated at farm-gate price, prevailed during the season.

**OFC under the Forward Sales Contract (FSC) program**

Maize, Soya, Green gram and Gherkin were promoted intensively in some irrigation systems under INMAS approach with assured water supply, input supply and assured market through Forward Sales Contracts (FSC). This program was implemented in *Huruluwewa, Dewahuwa, Badulu Oya, Bathmedilla, and Gal Oya LB* in 2011 *Yala* season. Farmers earned around Rs M 215.5 under FSCs while contributing to the national food production drive and also in assisting to reduce the drain on foreign exchange.

**Sandwich cropping**

Cultivation of a crop during the period between two main cultivation seasons capturing the residual soil moisture in the field and also with a few irrigation issues is called sandwich cropping. This cropping practice was being adopted during the periods after yala seasons from 2008 and 2010 consecutively at Kirindi Oya with active persuasion solely by IMD staff as a means of supplementary income source. However during Yala 2011, this practice peaked to around 8,706 ha of green gram being cultivated as a sandwich crop in *Kirindi Oya* and *Giritale* schemes which provided around 10,456 tons of green gram production to the local market giving an income of Rs. M.1, 044.

<b>Irrigation area</b>	<b>Extent - ha</b>	<b>Production - T</b>	<b>Value - Rs. M (@125 Rs/Kg)</b>
Kirindi Oya	8,686	10,432	1,042.0
Giritale	20	24	2.5
<b>Total</b>	<b>8,706</b>	<b>10,456</b>	<b>1,044.5</b>



Kirindi Oya - Green Gram



Experience sharing field visit by Ridi Bendi Ela Farmers to Kirindi Oya



Kirindi Oya- Drying green gram

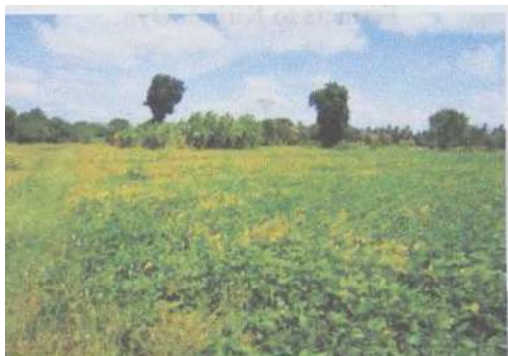


Kirindi Oya – green gram ready for selling

- **Project on Improved production of Thripasha using locally produced Soya as Raw Material**

An MOU was signed between United Nations' World Food Program and the Ministries of Agriculture, Health and Irrigation & Water Resources Management to implement the above project in 2010. IMD contributes to this project by providing technical assistance and guidance to Farmer Organizations and farmers, by coordinating and facilitating the Soya production and regular monitoring and by assisting to build the market linkage between producers and the Huruluwewa Farmer Company. The farmer company (FC) is identified as the Soya raw material supplier to Thripasha factory. This arrangement was accepted by all stakeholders of the Project as a viable and sustainable process with minimum supervision required.

The Project was initiated in 2011 and IMD assisted to produce Soya in 80 ha at Huruluwewa. The farmers earned about Rs Million 13.0 at a price of Rs. 70 per kg offered by FC which was about Rs. 25/- more than the farm gate price offered by middlemen in open market. The F.C. supplied 180 tons to Thripasha Factory, at a price of Rs. 95 per kg bringing a gross profit of around Rs. M 4.5 for the farmer company.



Huruluwewa – Soya fields



Huruluwewa – Soya Harvest

- **Big onion (BO) seed production**

Shortage of good quality seed affects the big onion production while resulting in short supply for annual consumption. Locally produced seed is accepted as superior to imported seed but the suitable onion bulbs should be vernalized in colder climate for around 2 weeks in order to make them suitable for seed production. This requires bulk transportation to colder areas and back, for which the costs are high and unaffordable for individual farmer, unless attended by a state

agency or an FO. The FOs guided by IMD officers have actively contributed to solve this constraint by facilitating the transport of onion bulbs for verbalization. This resulted in production of 380kg high quality BO seed locally. Though this is not significant in term of national BO seed requirement, steps will be taken to further expand this program through active involvement of FOs.

- **Cropping Intensity**

The interventions through INMAS approach assist in better planning for water resource use and adoption of suitable cropping patterns and cropping calendars. The INMAS interventions lead to judicious and conjunctive use of irrigation and ground water, rational use of irrigation water and also emphasis on reducing losses through adoption of suitable rotational irrigation issues which is adopted through participatory farmer managed process. Also, such interventions results in adoption of short age rice varieties as a standard in the entire irrigable area and in consecutive seasons as well which facilitates early start of cultivations. The resultant outcome of all those interventions is the increase in Cropping Intensity both on annual as well as seasonal basis. The CI in irrigation schemes managed by IMD was 195% for 2011.

- **Economic Development of Farming Community**

The net result of the IMD interventions for the improvement of the farming community is shown in the income generated at farm level resulting in overall economic development. The income generated mainly from rice and OFC production is the primary source for economic development while there are other sources of farm income such as livestock, horticulture, aquaculture etc. which are of irregular and supplementary nature. The cash circulated out of the income generated within the rural areas of irrigation schemes is tremendous and is reflected in the construction of new houses, and acquiring of industries, machinery, tractors, and vehicles and even on the extravagant appearance of the younger generation. The estimated incomes given in above paragraphs are summarized below in order to have a glimpse of the annual income obtained from farming in major irrigation schemes where interventions are conducted by IMD.

## 4 Capacity Building

Capacity building is an essential component in human resource development. IMD is actively involved in capacity building of both farming community and officers working within.

### • Farmer Training

Farmer training and awareness programs were conducted in almost all the irrigation areas covered by IMD on variety of subjects as given below.

Activity	Target		Progress		%	
	No. Programs	No. participants	No. Programs	No. participants	No. Programs	No. participants
Financial management	139	4721	81	2462	58	52
Legal empowerment	57	2215	15	497	26	22
Leadership Development	49	1703	12	316	24	19
Strengthening farmer organization	35	1070	19	531	54	50
Responsibility of field Channel Representatives	8	300	2	96	25	32
Subsystem Operation & maintenance	70	2159	7	223	10	10
Training on internal auditing	1	35	1	35	100	100
On farm Water Management	50	1715	6	174	12	10
Field visits (farmer exchange programs)	20	825	10	408	50	49
Dairy Farming	9	290	1	15	11	5
Maintenance of elephant electric fence	2	50	1	30	50	60
Organic manure production	2	70	1	43	50	61
Zone based Cultivation	–	–	1	40	–	–
Home garden development	–	–	1	58	–	–
Big onion cultivation	4	177	1	22	25	12
<b>Total</b>	<b>446</b>	<b>15330</b>	<b>159</b>	<b>4950</b>	<b>38</b>	<b>37</b>

Difficulty to find resource persons for the variety of subjects had hampered the skill development program. While the scarcity of professionals was a critical issue, their engagement in many other priority programs reduced their availability. In addition, priority duties kept the officers busy while organizing the farmers also was difficult during that period.

- **Officer Training**

Enhancing the quality of human resource through regular training and capacity building is an essential component of an organization. IMD has enabled number of its officers to acquire knowledge and skills on various aspects by getting them to participate in various local and international training programs. The following information indicates the number of officers and subjects participated by them.

### **Local Training**

The officers were granted training and skills enhancement in subjects which were of useful for the institute.

### **Foreign Training**

Capable and eligible officers were nominated for foreign training programs as and when offered by the respective countries. Officers have gained exposure to global concepts and approaches by participating in these international training programs.

### **Planning & Progress Review Workshop**

Periodic review of progress of field programs and delivering awareness on current status of national economy, policies and strategies for the field officers are essential to strengthen the coherence of IMD. In order to fulfill this, workshops were held for RPMs which were also

useful for candid discussions on new approaches for institutional development, O&M and economic development.

## **Conclusion**

The above progress was achieved by IMD with a severe shortage of field staff and also of supervisory and administrative staff. It uses alternative and pragmatic approaches to reach its targets in order to support the vision of Mahinda Chinthana in spite of staff, financial and logistic constraints. Functioning as a para- statal organization, it uses a “parasitic” approach where the beneficiaries and stakeholders are convinced and promoted to use their own resources to enhance their economic development which directly support the achievement of national development goal.

## **b. Pro Poor Economic Advancement & Community Enhancement (PEACE) Project**

The main objectives of the “PEACE” Project is to uplift the living condition of rural farmer community through development of irrigation infrastructure facilities and sustainable development of regional agriculture and there by to increase the farmers’ income with enhancement of living standard of rural farmers. “PEACE” Project activities consist of 08 major, 12 Medium and 80 Minor Irrigation Schemes and implemented in parts of four districts, namely Anuradhapura, Kurunegala, Matale & Puttalam. The specialty in “PEACE” Project is that the each activity such as identification, planning, implementation and operation etc. are solely executed by the beneficiary farmers. It is expected to invest Rs. 5,040 Million for Kurunegala, Anuradhapura & Matale Components where major portion of Rs. 3,867 Million by foreign aid provided by Government of Japan and the balance Rs. 1,173 Million from the Government of Sri Lanka. Total number of 25,000 farmer families will be benefited by the project and the project implementation period is from October 2006 to December 2011.

### **Main Components,**

01. Strengthening and Social Mobilization of Farmer Organizations (FO)
02. Rehabilitation and Improvements of Irrigation infrastructure facilities
03. Strengthening Agriculture Support Services
04. Improvements to Agriculture Productivity and Income Generation Activities
05. Improvements to Operation and Maintenance and Water Management
06. Improvements to Rural Credit

## Progress of Project Activities Implemented up to December 2011

### ➤ *Strengthening and Mobilization of Farmer Organizations,*

- Conducted 02 Nos. Financial Managements training programmes to FOO to build up their skills on book keeping and financial matters.
- Conducted 02 Nos. Construction Management training programme to FOO to build up their skills.
- Conducted 57 Nos. of training programmes to FOO improve their leadership qualities.
- Conducted 18 training programmes on operation & maintenance of bush cutters for FOO.
- Conducted 06 training programme on Human Resources Development for FOO.
- Conducted TOT programmes on operation & maintenance for 08 Nos selected resources groups of Line Agencies.
- Conducted 87 follow up meetings for reviewing of day to day activities of social mobilizers.
- Conducted 14 workshops for FOO leader to solve their problems and difficulties in performing Project activities and aware on methodology of establishing sustainability.



- Conducted 02 workshops to aware the local political leaders about the present progress and issues of Project implementation.
- Conducted 05 workshops on financial management and good governance.



- Conducted 223 Nos. programmes to introduce proper operation and maintenance programme for field and Distributory Canals.
- Conducted 08 workshop to introduce integrated resources management programme for FOO.
- Enganged 183 Social Mobilizers throughout the year for supporting social mobilization and strengthening activities of FOO and construction contract management activities.
- An allocation of Rs.10 Million was reserved of social mobilization and strengthening FOO nad Rs 9.8 Million of expenditure was made for conduct training activities.
- 25 Nos Officers and 15 Nos heavy machinery operators in the Irrigation Department were trained on operation and maintenance of heavy machinery with an expenditure of Rs. 1.9 Million.
- Rs 1.9 Million expenditure was made for field activities of Final Evaluation Survey of “PEACE” Project.



## 2. Rehabilitation and Improvements of Irrigation infrastructure facilities,

- **Rehabilitation of Main System ( Tank Bund, Sluice, Spillway, Feeder Canal and Main Canal)**
  - Completed Engineering survey and investigation of 50 km length of main and branch canals and feeder canal of major and medium Irrigation schemes in year 2011 to a value of Rs 150 Million and contract were awarded.

- Completed Rehabilitation of 120 km of main system consisting of main canals, Branch canals and field canals of Nachchaduwa, Nuwarawewa, Rajangana, Tissawewa, Magallawewa, Attargalla, Ambakolawewa, Palukadawela Major Irrigation Schemes and 10 Medium Irrigation Schemes to a value of Rs 309.3 Million from reserved allocation of Rs 310.0 Million.



#### ➤ Rehabilitation of Sub System ( Distributory and Field canals)

- An allocation of Rs 500 Million was reserved for rehabilitation of distributory and field canals of Nachchaduwa, Nuwarawewa, Rajangana, Tissawewa, Magallawewa, Attargalla, Ambakolawewa, Palukadawela Major Irrigation Schemes and 10 Medium Irrigation Schemes and a value of 502.70 Million contract works were completed by 80 Nos Sub system FOO.



- An allocation of Rs 26.0 Million was reserved for completing balance rehabilitation works of 36 Nos Minor Irrigation schemes out of 80 Nos schemes in Anuradhapura, Kurunegala and Matale Districts for an expenditure of Rs 26.6 Million.

➤ **Agriculture Development and Income Generation Activities,**

- Conducted 1,272 Acres of paddy yaya demonstrations, 52 Nos. farmer training programmes on Maximum Paddy Yield, Conducted 66 Nos farmer training programmes on High Quality Seed Paddy and 495 Acres demonstrations. Also conducted 281 Acres of parachute method of paddy cultivation in the Project area.
- Conducted 165 Acres of OFC cultivation which includes big onion, maize, ground nut, black gram etc., and enhance the income of farmers.



- Conducted 160 Nos. home garden demonstrations to develop productive homes in the Project area.
- Cultivated 81 Acres of fruit such as Mango, Banana, Orange, Passion Fruit, Guava, Papaya and Pomegranate in the Project area.



- Cultivated 130 Acres of vegetable cultivation, provide alkathene hoses and 76 Nos. water pumps among the potential farmers in the water scares areas to promote vegetables cultivation in the area.
- Conducted 06 Nos. of floriculture demonstrations programme.
- 25 Nos. farmer training programme were conducted to promote 300 Acres of inter cropping programme.
- 60 Nos. of high quantity rice production programmes were conducted and developed 30 Nos. of commercial level rice producers and 35 Nos. rice producing groups in the project area.
- Cultivated 200 Acres of coconut cultivation.
- Distributed of 28 Dairy Cattles among farmer families and 68 cow sheds. Supplied 62 Nos. milk cans and the total milk production was increased to 551,000 liters. Established 10 Bio gas units.
- Conducted 20 Nos. of farmer training programmes on Poultry Farming and 205 Nos. of back yard poultry units were established.
- Distributed 30 goats among farmer families.
- Introduced 240,000 Nos. of fresh water fish fingerlings to 12 minor irrigation schemes and also promoted 22 Nos. persons for Ornamental Fish culture. Approximate income received from Fresh Water Fish harvest is Rs. 2.6 Million.
- Conducted 10 Nos. of farmer training programmes 75 Nos and Demonstrations programmes on non – Agri based activities.
- A pilot project “University Village Programme” was launched with the participation of the Agriculture Faculty of Rajarata University of Sri Lanka, in the aim of development of integrated minor irrigation schemes in a cascade and provided facilities to laboratory and farm of the faculty and Out-reach center for continuous awareness of farmers in agricultural activities.

- An allocation of Rs 24.0 Million was reserved for Agriculture and income generation activities and Rs 23.5 Million was expended to conduct programmes and activities.
- To promote farmers on modern agricultural methods and business agriculture, 02 Nos model farms were established at Rajangana and Nachchaduwa schemes. Also a Nature Park with Eco-system development activities in promoting tourism industry, was established at surrounding Nachchaduwa tank.
- Provided Rs. 87.7 Million among 850 beneficiaries under rural credit programmes. An amount of Rs 82.0 Million was released to function as a revolving fund to IMD through the Regional Development Bank as loan managing institution.



➤ **Improvements to Operation and Maintenance and Water Management**

- Conducted 66 Nos. of Water Management and O&M training for 230 farmers of 58 FOO under minor irrigation cascade rehabilitation programme in Kurunegala district with an expenditure of Rs 2.1 Million.

### c. Performance of Uma Oya Multipurpose Development Project (UOMDP)

<b>Project Title</b>	:	Uma Oya Multipurpose Development Project
<b>Employer (Client)</b>	:	Ministry of Irrigation and Water Resources Management
<b>Main Contractor for Head Works</b>	:	Farab Company of Iran
<b>Contract Sum</b>	:	USD 529,059,198
<b>Date of Contract Effectiveness</b>	:	15 <sup>th</sup> March 2010
<b>Funded by</b>	:	Government of Islamic Republic of Iran (GIRI) <b>through</b> Export Development Bank of Iran (EDBI) USD 450,000,000 Government of Sri Lanka (GOSL) USD 79,059,198
<b>Financing Agreement</b>	:	LKA No. 870/L/LKA/01 Signed on 28 <sup>th</sup> April 2008
<b>Objectives</b>	:	Transbasin diversion of approximately 145 Million Cubic Meters (MCM) of water annually from Uma Oya basin to Kirindi Oya basin to irrigate 5000ha of new land and to provide drinking and industrial water requirement (30MCM) of the South East Dry Zone (SEDZ) and to harness hydro power potential to generate 231 GWH annually with an installed capacity of 120MW.
<b>Estimated Total Project Cost : Including Downstream (Kirindi Oya Basin) Development</b>	:	(1). Head Works USD 450,000,000 from EDBI plus USD 79,059,198 (GOSL) & Rs. 6,121,750 ( <b>GOSL</b> )  (2). Downstream Development Works Rs. 9,352,500,000 (GOSL) for Downstream Development

## Main Components of the Project

1. Construction of a dam/ reservoir at Puhulpola.
2. Construction of a dam/reservoir at Dyraaba.
3. Construction of a tunnel connecting the above two reservoirs.
4. Construction of Headrace Tunnel from the reservoir at Dyraaba up to the vertical shaft.
5. Construction of an underground power station.
6. Tailrace Tunnel from the power station up to Alicota Ara.
7. Construction of New Tank/ Reservoirs, Canals and associated structures in Kirindi Oya Basin.
8. Augmentation of capacities of existing Tank/ Reservoirs, Canal System and associated structures in the Kirindi Oya Basin to cater for the demand.

## Progress

### Head Works

#### 1. Land Acquisition

Land acquisition for following work sites are completed.

1. Contractor's Residential Camp at Karandagolla
2. Access Road to TBM Portal
3. Main Access Tunnel Portal Area
4. Access Road to Dyraaba Dam
5. Resettlement Camp at Moragolla Estate

Land acquisition for following work sites are in progress

1. Access road to Tailrace Portal
2. Tailrace Tunnel Portal
3. Dyraaba Reservoir bed area
4. Puhulpola Reservoir bed area
5. Resettlement camp at Mirahawatta
6. Resettlement camp at Dyraaba

#### 2. Design

1. Preparation of Feasibility Study Report – 80% completed
2. Design of Access Roads and other Infra – structure Works is in progress
3. Procurement of tunnel Boring Machines is in progress
4. Construction Activities



- |                                     |                 |
|-------------------------------------|-----------------|
| 1. Contractor's Residential Camp    | - 65% completed |
| 2. Project Office complex at MAT    | - 35% completed |
| 3. Access Road to TBM               | - 78% completed |
| 4. Access Road to Dyraaba dam       | - 48% completed |
| 5. Access Road to MAT Portal        | - 55% completed |
| 6. Access Road to Tailrace Portal   | - 14% completed |
| 7. Excavation of Main Access Tunnel | - 3% completed  |

### Downstream development Works

#### 01. Alikota Ara Reservoir system

- Location of the proposed reservoir is finalized
- Marking reservation boundary was completed
- Socio – economic survey was completed
- Spill site survey was completed
- Taking LSS and CSS and checking physically of the proposed canal is in progress at 12<sup>th</sup> Km.
- Design work of Sluice and Spill are in progress.

#### 02. Handapanagala reservoir System (Existing Tank)

- Marking reservation boundary was completed
- Socio – economic survey was completed
- Taking LSS and CSS and checking physically of the proposed canal is in progress at 10<sup>th</sup> Km.
- Design work of Sluice and Spill are in progress

#### 03. Kuda Oya Reservoir System

- Location of the proposed reservoir is finalized
- Estimation of access road from Wellawaya – Thanamawila road is in progress (2kms completed out of 15 Km.)
- Design work of Sluice and Spill are in progress.

Allocation for the year 2011	-	5449.84 Rs. Mn
Expenditure as at the end of the 4 <sup>th</sup> Quarter	-	3219.91 Rs. Mn
Overall Physical Progress	-	9.45 %

## **7. Departments, Statutory Boards and Public Enterprises under the Ministry and Performance**

- a. Irrigation Department (ID)
- b. Mahaweli Authority of Sri Lanka (MASL)
- c. Water Resources Board (WRB)
- d. Central Engineering Consultancy Bureau (CECB)

### **a. Irrigation Department (ID)**

#### **Vision**

"Not let a single drop of rain water flow to the sea without first being used for the welfare of mankind"

*King Maha Parakramabahu the Great*

**1153-1186AD**

#### **Mission**

The Mission of the Irrigation Department is to ensure optimum utilization of Water Resource for enhancing the living condition of the farming community of the country and all other uses of Water Resources in sustainable, productive, equitable and environment friendly manner with due attention to conservation of water shed areas. Hence the Irrigation Department is responsible for planning, design, construction, operation, management, rehabilitation and efficiency improvement of all major and medium Irrigation schemes and works related to flood control, drainage and salinity extrusion.

#### **Functions of the Irrigation Department**

The functions of the Irrigation Department arising from the objectives are as follows;

- a. Preparation of Master plan for development of the different river basins for the optimum utilization of land and water resources giving priority to the environmental factors.

- b. Project formulation and detail designs of Irrigation, Hydro-power, Flood control and Reclamation Projects.
- c. Construction of Irrigation and Settlement Projects for the conservation, diversion and distribution of water under gravity and lift Irrigation to new and existing land for cultivation by farmers for an enhanced food crop production and to upgrade their living conditions.
- d. Construction of Drainage, flood protection and salt water exclusion projects for the protection of cultivable land to enable the cultivation of such lands with rainfall for food crop production with minimized risk.
- e. Providing Drainage and flood protection facilities to minimize or mitigate the damages caused by floods.
- f. Operation, Maintenance, Improvements, Rehabilitation and Water Management for Medium and Major Irrigation Schemes., Drainage and flood protection scheme and salt water exclusion schemes for optimum productivity enlisting the participation of beneficiaries. Catering of water for Inter Sectorial use, domestic, industrial use and environmental requirements. Construction and maintenance of Conservation Reservoirs.
- g. Maintaining and upgrading the water infrastructure including dams for sustainable water supply to agriculture and domestic purposes.
- h. Research in Hydraulics, Hydrology, Soil Mechanics, Engineering Geology, Geographic information System (GIS), Engineering Materials and Land Use as applied to water Resources Development Projects.
- i. Human Resources Development for optimum utilization of Human Resources.
- j. Operation and Maintenance of Financial Management system, Accounting, Reporting, Auditing systems of Irrigation Department in accordance with the financial Regulation of the Government of Sri Lanka.

- k. Providing Consultancy Services to government department, Statutory Boards/Corporation, public and private institutions and individuals; in the fields of Water Resources Development; Foundation Engineering; Quality Control of Earth work and Concrete; Hydraulic Model Testing and Land Use Planning.

### **GOSL funded Projects Implemented by Irrigation Department**

The total financial allocation for capital expenditure for the year 2011 was Rs. 6721.43 million and Rs.5234.60million was spent up to the end of the year 2011. Detailed account of the progress of individual items is given below with a brief description of the items and present financial position of work.

#### **Summary of Capital Expenditure**

<b>Name of Project</b>	<b>Allocation for year 2011 /Rs. million</b>	<b>Cumulative Expenditure in year 2011/ Rs. million</b>
Project 1 Administration and Establishment services	37.6	34.70
Project 2 Administration and maintenance of Irrigation schemes	2232.67	2099.49
Project 3 Major Irrigation Schemes	4085.85	2905.57
Project 4 Minor Irrigation Schemes	365.31	194.83
<b>Grand Total</b>	<b>6721.43</b>	<b>5234.60</b>

**Major irrigation Schemes**

1. Deduru Oya Reservoir
2. Weheragala Project
3. Rambukkan Oya Reservoir
4. Lower Uva Project
5. Lunugamwehera Scheme ( KOISP LB tract 3) Water Management Project
6. Ellapothana Anicut
7. Gal Oya Navodaya
8. Essential Rehabilitation in selected Major Irrigation Schemes

**Medium Irrigation Schemes**

1. Rehabilitation of Minipe Main Canal
2. Restoration of Maha Halmillawa wewa
3. Muthukeliyawa Anicut Extension (SIRUP)
4. Wemedille Reservoir (SIRUP)
5. Kekeiri Obada Reservoir (SIRUP)
6. Construction of Hekitta Minor Flood Protection Scheme (SIRUP)
7. Hettige Ela Development (SIRUP)
8. Medagama Gonagama Wewa (SIRUP)
9. Wewelanda Wewa (SIRUP)
10. Gurugal Oya project
11. Reconstruction of Chirumpunchennai anicut

PERFORMANCE OF THE MAJOR & MEDIUM SCHEMES – 2011											
MINISTRY OF IRRIGATION & WATER RESOURCES MANAGEMENT - IRRIGATION DEPARTMENT											
	Project Name	Type of Scheme	Cum. Financial Progress ( Rs. Mn. )		Financial Progress During 2011 ( Rs. Mn.)			Overall physical progress to end of Dec.2011 %	Extent benefited (Ha)	No of Farm Families	Remarks
			TEC	Cum. Exp. To end of December 2011	Allocation 2011	Total Exp. To end of December	% Utilized				
1	Deduru Oya Reservoir	Reservoir	6200	4215.56	2100.00	1616.31	76.97	66	11,000	6,500	work in progress
2	Menik Ganga Reservoir	Reservoir	2900	2006.15	178.41	107.60	60.31	100	10,000	8,000	Environmental component work in progress ( Additional work)
3	Rambukkan Oya Reservoir	Reservoir	2500	2006.50	800.00	797.90	99.74	80	1,422	1,000	work in progress
4	Yan Oya Project	Reservoir	8700	3.13	200.00	0.00	0.00	0	4,925	6,000	Investigation in progress
5	Lower Uva Project	Minor/Medium Irrigation Schemes	550	129.53	161.03	59.12	36.71	33	1,670	1,500	work in progress
6	Lunugamwehera Scheme	Reservoir	17	13.51	10.11	1.59	15.77	67	40	100	work in progress
7	Elapothana Anicut	Reservoir	300	148.40	85.30	26.67	31.27	70	625	1,038	work in progress
8	Galoya Nawodaya	Irrigation System	1260	334.56	300.00	123.65	41.22	28	42,000	51,000	work in progress
9	Essential Rehabilitation in selected Major Irrigation Schemes	Major Irrigation Schemes	1000	286.07	250.00	172.73	69.09	28	8,000	10,000	work in progress
10	Muthukeliyawa Anicut	Anicut	77	76.02	10.56	9.58	90.72	85	321	400	work in progress
11	Wemedilla Reservoir	Reservoir	335	302.88	46.20	40.48	87.62	100	720	600	work completed
12	KekiriOboda Reservoir	Reservoir	445	444.94	7.01	7.01	100.00	100	1,512	1,500	work completed
13	Hekitha Minor Flood Protection	Anicut	47	32.91	19.90	5.82	29.25	50	500	500	work in progress
14	Gurugalya Project	Reservoir	400	164.00	250.30	121.33	48.47	40	810	2,400	work in progress
15	Mahahalmilla Wewa	Reservoir	61	56.92	3.50	0.00	0.00	96	250	500	work in progress
16	Ural Oya	Anicut	34	0.00	2.50	0.15	6.00	80	350	100	work in progress
17	Minipe Main canal	Anicut Scheme	12.8	11.02	2.47	2.47	100.00	100	6,100	10,000	work completed
18	Hettige Ela	Anicut	42	23.55	7.00	1.66	23.71	90	800	500	work in progress
20	Medagama Gonagama	Reservoir	22.5	17.00	5.27	1.75	33.21	100	57	200	work completed

## Deduruoya Reservoir



Deduru Oya and Mi oya are two adjacent river basins located in North Western province; More than 80% of the water resources of Mi oya basin is developed while much of water resources in Deduru oya are yet to be developed. Deduru oya basin lands are almost fully developed while Mi oya basin lands are yet to be developed especially in the lower catchment.

Therefore it is planned to exploit the Deduru oya water resources in improving the productivity of existing agricultural lands under minor irrigation schemes and to develop new lands in Mi oya and Deduru Oya basins. Deduru Oya is the fourth largest river in Sri Lanka.

Deduruoya project envisages construction of a Reservoir across Deduru Oya, 300 m upstream of existing Redi Bendi Ella. Dam type is homogeneous earth fill dam. The capacity of the reservoir is 75 Mm<sup>3</sup> and the length of the dam is 1900m.



LB Canal



Construction of spillway

The reservoir consists of radial gated spillway and concrete tower sluice. Length of LB main canal and RB Trans-basin canal are 45 km and 32km respectively. Total length of other canals is 200km.

The Estimated cost of the project is Rs. 6200 million. Irrigation water will be provided to 27,000 acres of land extend and the 11,000 numbers of farmer families will be benefited.

97% of main bund, 93% of LB sluice and RB sluice, 45% of spillway, 60% of LB canal and 50% of extension of Magalla Ela were completed and these items will be completed in 2012. Expenditure in year 2011 is Rs. 1612.3 and cumulative expenditure of the project up to the end of year 2011 is Rs. 4215.56 million. In addition average, 66% of the work is completed. The project will be completed on 2013.

## Weheragala Reservoir Project

Weheragala Reservoir project envisages regulating about 80% of water available in Manik Ganga at Weheragala by constructing an environmental friendly reservoir with a water way conveying about 64 Mm<sup>3</sup> of regulated water to water deficit Kirindi Oya basin while releasing about 30 Mm<sup>3</sup> regulated water down Manik Ganga.



Length of the dam of the reservoir is 2031m and the type is



homogeneous earth fill. The reservoir consists of radial gated spillway and concrete tower sluice. Length of the main canal is 22.35 km.

The Estimated cost of the project is Rs. 2900 million. Irrigation water will be provided to 5000 ha of land extend and the 5000 numbers of farmer families will be benefited. The project is almost completed and the Rs. 2006 million has been utilized.

Presently development of Lunugamwehera National park is carried out under this project and construction of Rathmalgahawewa, Thalgahadigana wewa, Lolugas wewa, Ginikasawewa spill are completed. 90% of the works under development of road network is completed.

## Rambukkan oya Reservoir Project

Proposed Rambukkan Oya Reservoir and irrigable area of the project are located in the Mundeni Aru river basin in Ampara district. The scheme is sited at Watawalakandiya across the Rambukkan Oya . The tank bund across the Rambukkan Oya is situated midway between Pollebedda and Kurunduwinna villages in Bintenne Pattu North in Ampara District.

The area is presently sparsely settled and lack of roads, schools, health services and other civic amenities. Presently less than one percent of the land area is utilized and the people practice slash and burn rain fed agriculture. About 2000 landless families have been proposed to be settled under the proposed scheme.

Gross capacity of the reservoir is 75 Mm<sup>3</sup>. Length of the earthen dam is 1097 m. The reservoir consists of radial gated spillway and concrete tower sluice. Length of the main canal, LB branch canal, RB branch canal are 7.6 km, 4.6km, 22.8km respectively.

The Estimated cost of the project is Rs. 2500 million. Irrigation water will be provided to 1400 ha of land extend and the 2000 numbers of farmer families will be benefited.

93% of the construction of tank bund, 95% of the construction of sluice, 40% of the construction of spillway, 98% of the construction of the main canal, 91% of the construction of the access road, 47% of improvements to minor tanks and 23% of the construction of distribution canals are completed. Overall physical progress of the project up to the end of the year 2011 is 80%. Allocation for the project in 2011 was Rs. 800 million and Rs. 797.9 was expended.

The project will be completed in 2012 and the overall expenditure up to the end of December 2011 is Rs.2006.5 million

### **Lower Uva Minor/ Medium Irrigation Project (LUMP)**

An MOU was signed between irrigation Department and District Secretary of Monaragala to implement irrigation development in Monaragala District simultaneously with the implementation of Weheragala project from which, Water of Menik Ganga diverts to Lunugamvehera reservoir with the strong request made by the farmer community in the area.

After investigating Proposals of MOU, 38 numbers of minor schemes were identified to rehabilitate with the construction of Debaraara feeder canal of the project is Rs. TEC 540.0 million. By the end of year 2011 rehabilitation of 15 numbers of minor schemes and one medium scheme were completed. The cumulative expenditure at the end of year 2011 is Rs. 129.53 million.

Item Description	Allocation(Rs Mn)	Expenditure (Rs Mn)	Physical Progress (%)
Construction of Debarara feeder canal	25.788	9.295	30
Rehabilitation of Halmiiapillawa tank bund	39.000	30.472	100
Construction of Colombowatta tank	8.440	5.425	100
Construction of Uruhore tank	10.423	4.293	80
Construction of Mallipotha tank	60.000	9.606	15
<b>Total</b>	<b>143.651</b>	<b>59.087</b>	



Construction of Debarawewa Feeder Canal





Rehabilitation of Mallipotha Tank



Rehabilitation of Uruhore Tank

### **Lunugamwehera Scheme (KOISP LB tract 3) Water Management Project**

Conventional methods utilize more water for irrigation. There is scarcity for water in many areas. A new technique in irrigation has to be introduced in these areas which utilized less water. Drip Irrigation is the most suitable alternative for this. In order to introduce and use drip irrigation technique it was decided to launch a “pilot Project” and Lunugamvehera in Hambanthota was selected for this. Under Lunugamvehera LB main canal Ranminitenna area was selected to implement the pilot project. Initially 2 nos. lots of 2 acres are developing. Water collecting tanks will be constructed along the main canal. After installing drip system in the lands water will be supplied by water pumps. Presently installing of drip irrigation system and construction of water tank are carried out. Estimated cost of the project is Rs. 17.2 million.

Allocation for the year 2011 is Rs 10.11 Million. Physical Progress of the project is about 66%.

## Ellapothana Anicut Scheme

The proposed anicut is to be constructed across Yan Oya about 24 km downstream of existing Illukwewa anicut. It is proposed to augment the existing tanks on both LB and RB sides of the Yan Oya River. In the LB canal it is proposed to augment Wedigawewa, Elapatwewa, Wilewewa, Kudawewa and Thirappankadawalawewa. In the RB canal it is proposed to augment Ellapothana- Siyambalawewa and Wahagahapuwewa and to be constructed along the existing Yoda Ela which is now in completely abandoned state.

Ellapothana Project is a 300M worth project which including a radial gated anicut structure across yan oya at Ellapothana and 2 canals at each banks. More than 8 village tanks will be fed to facilitate irrigation water for 1550 acs of lands.

The Ellapothana LB canal is supposed to be extended up to Padaviya tank and Feasibility Studies & field survey works are in progress. It will nearly get 40 km in length to reach Mora Oya which feed Padaviya Tank.

Physical progress of the project is 70% and the cumulative expenditure up to the end of year Rs. 148.4 million.

Construction work progress of Ellapothana anicut scheme.



## Galoya Navodaya

Galoya Scheme is the largest single Irrigation Scheme in the island serving well over 42000 ha of agricultural land, most by paddy. Irrigation system in Galoya scheme was rehabilitated 30 years ago under a USAID assisted project. While it has improved the system performance, a few drawbacks still prevail.

Galoya Navodya Programme, a Renaissance programme, is implemented as a continuation of the expanded development process and forming a component of “Neganihira Navodya”. While meeting the demands of the times, it has contributed to overall sectoral plans and National Development goals.

Ultimate objectives and goals of this program will be the benefits from income generation, more employment and uplift of living standards of the population. This Project will aim to achieve social harmony along with the development efforts. In general, the main objective, re-orientation of the future with new vistas towards transformation of the Gal oya valley into a more dynamic production oriented unit, from its large agriculture background.

The project activities include the following main components.

- i. A Comprehensive Water Resources Development and irrigation Plan, that will harness unutilized potential, and increase efficiencies in the usage of water.
- ii. A productivity Enhancement program in order to generate more income from irrigated Agriculture.
- iii. Improving and upgrading the physical infrastructure to serve the people: road, water supply, sanitation, education etc.
- iv. Harnessing the potential for Agro-based industries including post-harvest activity, for value addition and enterprise development.

Irrigation and Water Resources Development component implemented by Irrigation Department and the following activities were undertaken during 2011 under that component.

- **Extension of Main canal of Pannalgama**

The field canal and field canal roads under PG 32 canals were constructed and the farmers in the area were able to attain a bumper harvest from 2011 yala season. The area under plough during 2011 estimated as 115 acres (new acreage).

- **Rehabilitation of Galoya LB system. (Sinnawatta, weeragoda and Annamale)**

Sinnawatta, Weeragoda and Annamale area were irrigated by the tail end of Galoya L.B. main canal and part of the irrigable area falls under Batticaloa District. About 2000 families are living in this area. Cultivation under the scheme is commenced by G.O.D.B in 1964 and the scheme has been handed over to Irrigation department. As there were no rehabilitation done during last 02 decades due to security situation prevailed in this area, the most of the structures were damaged. This part of the scheme deteriorated heavily due to the Terrorist activities.

Due to the Activities taken to rehabilitate the Tail end of Gonagolla and Mandur branch canal and the distributary canals feeding the above area, the farmers were able to receive an assured irrigation delivery after a long gap (02 decades) and cultivation of a successful Yala 2011.



Gonagolla Unit under Gal Oya Navodaya Project

- **Rehabilitation of Galoya RB system.**



This system is served by the Right Bank main canal which heads at the trifurcation at Inginiyagala. The main drawback identified in the above system as follows:

- ✓ Lack of adequate irrigation in the tail end of the canal due to the rocky section in the main canal which blocks the normal delivery towards tail end.

- ✓ Lack of Infra- structure facilities to transport the agriculture inputs and the harvest from the system. During 2011, the bottleneck in the Galoya RB main canal was completely cleared by rock excavation and removal the blockade. Further a bridge was constructed across RB 31 distributary canal which paves the way for access to more than 750 acres of paddy lands
- Rehabilitation of Galoya River Division.

This is an ancient system, well before construction of Senanayake Samudra, serves a total area of 11700ha, and contains more than 30 Anicuts.

Construction of 03 numbers of new anicuts were proposed to replace the collapsed anicuts in the project and Kanthanveli anicut construction was completed whereas the Thirai Odai anicut construction is on Progress. In addition the above Moravil Anicut, Soorayadi Anicut, and Vannamadu regulator in vulnerable stages, were protected.

### **Essential Rehabilitation in Selected Major Irrigation Schemes.**

The main objective of this project to stabilize and increase agriculture production in some selected major schemes by rehabilitation the essential components of the downstream canal system. (Mainly D- channels and Field channels.) It has been selected about 43 irrigation schemes, island wide, based on an approved selection criteria for carrying out essential rehabilitation works serving about 8000 ha of existing and abandoned irrigable land. Total Estimate Cost of the project is Rs. 1000 million. Allocation for the year 2011 is Rs. 250 million and Rs. 172.73 million has been utilized up to the end of the year. Cumulative Expenditure of the project up to the end of year 2011 is Rs. 286 million.



Construction of Bogahakumbura tank in Badulla under Essential Rehabilitation of Major/Medium Irrigation Schemes

## Muthukeliyawa Anicut Extension

This anicut is located at upstream of Buttala Anicut in tributary of Manik Ganga. There is a feeder canal 5 km long to feed Kongaha Wewa presently cultivate 100 ha.

Under this project it is proposed to improve and feed a series of 7 minor tanks. A supply canal from Kongaswewa feed Serugan Aru Wewa on the way to existing Raja Ela.

Another supply canal from existing Karawilakanatta wewa, feeds few tanks and end up at Thammanaaara wewa. The additional water can increase cropping intensity of the above tank up to 200% and additional area of 100 ha can be brought under irrigated agriculture.

Most of the necessary structures along the feeder canal like drop structures, spill cum Causeway, bridges, turnout structures etc. are already constructed but some more structures are to be constructed. Canal excavation is almost complete but rock excavation is not

Estimated cost of the project is Rs. 77 million. 220 numbers of farmer families are benefited from the project. Rs.76.2 million has been utilized up to the end of year 2011. 85% of the project is completed.



## Wemedilla Reservoir

It is proposed to construct a reservoir with a capacity of 4593.65 ac. ft across Welamitiya Oya, which is a tributary of Dambulu Oya. This proposed project will benefit 720 acres of new land and 1,142 acres of existing lands, including the lands along the supply canal. The estimated cost of the project is Rs. 335 million. The project head works are completed and Rs. 44.1 million has been utilized in year 2011. Fencing around recently acquired reservation in Wemedilla Bund toe, Gravelling along the Tank Bund toe road, improvements to chute type spillway are completed. Improvements to tank bund, Rip Rap, LB and RB sluices, canal systems, roads and building are in progress and were completed in year 2011. Physical progress of the project is 100%. Compensation for acquiring of lands and building has to be completed.



Constructions

### **Hettige Ela Development**

The project is located in Kaduwela and Homagama DS divisions in Colombo district covering the area of 1700 acres Kelaniganga river basin which frequency undergoes flooding. The project was commenced in 2005 as a SIRUP project and presently about 90% of the project is completed.

Rehabilitation of all branch channels of Hettige Ela which is the main channel is completed.

Earlier in this area about 400 acres cultivated in only one season and after parallel to this project, under the cultivation of abandoned paddy lands with helps of other organizations 1700 acres was cultivated in both seasons and received the heights yield in the country according the Agricultural Department survey.

This was achieved due to protection of paddy lands from frequent flooding after the development of 9.48 at main channel and about 25k.m of branch channels by the Irrigation Department.



## Gurugal Oya Irrigation Project

In the Gurugal Oya reservoir project, it is proposed to augment the main canal of Murapola Ela scheme. Murapola Ela is the second biggest major irrigation scheme in Kandy district situated on the cold climates of Hewahata electorate in Kandy District.

Estimated cost of the project is Rs.400 million. Irrigation water will be supplied to 810 ha. and 2400 numbers of farmer families will be benefited. Overall physical progress of the project is 40%. Cumulative expenditure of the project up to end of 2011 is Rs. 164 million.

85% of the Construction of LB road and 40% of the construction of RB road are completed. Construction of main dam, LB and RB side abutments are in progress.



## Rehabilitation of Irrigation Schemes (ISRP)

The project, which is entirely funded by the National Budget, was proposed in line with the government aims of in irrigated agriculture and improving the livelihoods of farming community. Sustaining and Enhancing Efficiency and Productivity Starting in the year 2000, 57 major and medium schemes in 16 Districts benefiting an extent of around 50,131 ha have been included under the project.

The works are carrying out for the year 2011 consists of 74 items of Head Works, Main and distributary canals in twenty two irrigation schemes in Eleven (11) Regions. List of schemes is given below. Total allocation released for year 2011 is Rs.60 million and Rs.59 million has been already utilized.

## **b. Mahaweli Authority of Sri Lanka (MASL)**

### **Vision**

“Harnesses Rivers, Well – Managed Basin Moved from Agrarian to prosperous society and promoted Economic Development”

### **Mission**

“He Improvement of Human life in the Mahaweli Impact areas”

### **Development projects and programmes implemented in 2011**

Total capital provision for the Mahaweli Development Programme in 2011 was Rs 7,025 Million.

The financial progress up to the end of December 2011 is as follows.

Rs (000)

<b>Type of Project</b>	<b>Budget Provision</b>	<b>Amount Released from the Treasury</b>	<b>Expenditure</b>
Foreign Funded Projects	5,005,000	2,478,465	2,469,265
Mahaweli Projects	605,000	486,085	487,848
Feasibility Studies	320,000	9,000	11,277
Administration and Maintenance	1,095,000	659,031	79,070
<b>Total</b>	<b>7,025,000</b>	<b>3,632,581</b>	<b>3,766,459</b>

## **Foreign Funded Projects**

### **1. Dam Safety and Water Resources Planning Project**

The project objectives are to: (a) establish long-term sustainable arrangements for operation and maintenance of large dams; and (b) improve water resources planning that would contribute to protecting the public from potential water induced hazards and enhance the long term capacity for sustainable planning and management of water resources and related hydraulic infrastructure of the country. The project outcomes would complement and supplement the government effort for rural development, growth and poverty alleviation and protecting the public from natural hazards. These objectives will be achieved by implementing three main project components namely (i) Improving dam safety and operational efficiency; (ii) Upgrading and modernizing the existing hydro-meteorological information systems; and (iii) Providing technical assistance for developing national water use plans which includes (1) National water use plan, (2) Update Mahaweli Water Resource Development Plan and (3) Mundeni Aru Basin development plan.

The Project is being implemented by five Implementing Agencies (IAs) namely Mahaweli Authority of Sri Lanka (MASL), Irrigation Department (ID), Ceylon Electricity Board (CEB), National Water Supply and Drainage Board (NWS&DB) and Water Resources Board. The project was planned to implementing within 5 years 2008-2013.

The total estimated project cost including contingencies is Rs 8,187 million equivalent to US\$ 75.8 million of which Rs. 7,585.64 million (US \$ 70.23) is financed by the IDA-WB and balance amount is contributed by GOSL. Project is executed by the Ministry of Irrigation and Water Resources Management and implemented by the Implementing Agencies together with Project Management Unit.

Project has shown satisfactory progress since commencement of the project in June 2008. It was planned to invest Rs. 2,425 million in 2011 with the anticipation that all remedial work contracts would award by end of 2011. However, finalization of detailed designs and tender documents by Implementation Support Consultants (ISC) are delayed as complicated nature of dam structures of remaining dams and also due to time taken by Review Committees and Technical Evaluation Committees to take decisions on critical technical issues on certain sections of the designs. Therefore, expenditure incurred in 2011 is limited to Rs 1,233 million. Up to now Project has utilized Rs 2,387 million out of Rs 8,187 million allocated for the project and reached to 29% financial progress and 40% physical progress by end of 2011. Three main project components are at different stages of implementation process and their current status is given bellow.

### **Component 1: Dam safety and Operational Efficiency**

Component 1 constitutes 75% of project funds. Implementation Support Consultants (ISC-1) has completed development of conceptual designs for 32 dams, detailed designs for 29 dams, tender documents finalized for 24 dams and contracts awarded for 22 dams. Up to now, two contracts for remedial works for two dams have been fully completed and balance 20 contracts for major repair works in 22 dams are at various stages of implementation. Among them 70% repair works in Parakrama Samudraya is completed, about 45% construction works is completed each in Kantale, Inginimitiya and Bowatena; and construction works of rest of contracts are ranged between 5% - 20%.



Construction works going in Ridiyagama dam



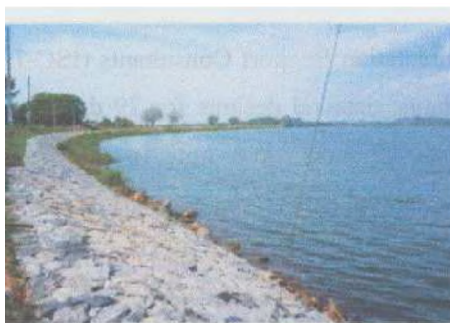
Newly constructed LB sluice (left) and repairs being done to radial gates (right)

in Tabbowa dam



Establishment of rip-rap in new section

Newly constructed Foot Bridge over spill way in Kandalama dam of the Chandrika wewa dam



Re-arranged Rip rap in Kandalama dam

Re-arranging rip rap in Parakrama  
Samudrayadam

A large number of equipment and facilities were procured and distributed among 80 large dam sites including 32 dams identified for remedial work to ensure basic safety facilities. In addition, project has supported dam owners to undertake essential emergency repair works in 48 dams (other than 32 dams selected for remedial works) and related structures to provide access road, lighting facilities and security facilities. Accordingly 49 contract packages were identified by dam owners and out of 49, 44 packages have been awarded. Up to now, 16 packages have completed with basic safety civil works by contractors and more than 75% work is completed in another 7 packages and 25%-75% progress is achieved in 12 packages. Progress of rest of 9 packages is less than 10%.

In the process of establishing long-term sustainable arrangements for operation and maintenance, 8 Emergency Action plans developed for 8 dams, 32 O&M manuals are being developed to carry out regular dam safety Inspection with standard guidelines and procedures. Comprehensive dam safety inspection & reporting is completed for 3 dams namely Kotmale, Victoria & Randenigala and work in progress in Samanalawewa. Analysis, evaluation & interpretation of Instrument data for selected 5 dams are being carried out by consultant and 20% of work completed for Kotmale, Polgolla, Victoria, Randenigala & Rantembe. Inspection of Minipe Trans Basin Canal is completed and submitted the proposal on recommendations for remedial measures. The consultant team is developing provision of Computer Based Maintenance Management System for selected dams.

Among the 32 dams identified for rehabilitation, 7 dams were initially earmarked as most critical and sensitive dams that affect the downstream community and properties during the rehabilitation period due to nature and extend of social impact occur as a result of rehabilitation. In order to mitigate possible impact to downstream community, Social Safeguard Management programme has been implemented in 5 dams and Livelihood Support Assistance Plans (LSA) have been developed for 5 dams to be implemented in 2012 Yala.

As a pre-requisite project has developed 32 Environmental Management Plans (EMP) for 32 dams identified for rehabilitation and got clearance for the plans from World Bank, Central Environmental Authority (CEA) and Provincial Environmental Authority of North Western Province [PEA (NWP)]. Now EMPs are being implemented along with the construction programme by contractors and monitoring by PMU. Project has extended its activities to conduct awareness programme on waste management at dam sites to make sure that dam surrounding are kept clean and beauty.

### **Component 2: Hydro Meteorological Informatin System**

Project suffered from initial delays to take decision on technical modality to be adopted on mobilization of Supply, Install and Commission (SIC) contract. After having establishment of Technical Working Group (TWG), Cabinet Appointed Technical Evaluation Committee (CATEC) and Cabinet Appointed Procurement Committee (CAPC) to facilitate the procurement process, bids were invited. Accordingly evaluation of Technical proposals is completed and financial proposals have been invited. Contracts will be awarded by end of April 2012.

Pilot Groundwater Monitoring Network has been established in 7 pilot areas identified on the basis of critical ground water use, management, and quality issues to covering 30 Divisional Secretariat Divisions (DSDs) Island wide and commenced monitoring of water levels and water quality in well selected for the network.



AGI equipment set up for geophysical survey



Taking 2-D images for subsurface groundwater exploration by ERT

technique using high-end AGI  
Geophysical equipment system

### **Component 3: Multi-Sectorial Water Resources Planning**

Modeling/Decision support system, knowledge base, strategic environmental and social assessments and capacity development in the process of water use plan development are underway. Preparation of integrated and comprehensive Water Use Plans for National level, Mahaweli System and Mundeni

Aru Basin are at different stages of progress. Initial assessment reports were developed for National Water Use Master Plan, updated Mahaweli Water Resources Development Plan and integrated and comprehensive Water Resources Plan for Mundei - Aru Basin. Preliminary level Mike basin model was developed separately for national level, Mahaweli areas and Mundeni aru basin based on selected rivers and lakes. Model setup is completed by covering 103 river basins, 14 coastal areas and also based on demand time series for irrigation schemes, water supply schemes and hydro power generation. Updated Mahaweli model was setup and ran for baseline condition.

Consultant has developed draft National Atlas and commenced NDVI analysis and LANDSAT imagery 2009 to produce vegetation maps and shapes files.

## 2. Moragahakanda- Kaluganga Development Project

On-going Morogahakanda-Kaluganga Development is one of the major irrigation and agriculture development projects in the Mahweli Master Plan. Objectives of the project is to provide additional irrigation facilities to about 81, 500 ha in the dry zone, generate 20MW of hydro-power and supply of potable and industrial water for the districts of Anuradhapura, Polonnaruwa, Matale and Trincomalee. The project activities includes construction of two reservoirs, namely, Moragahakanda Reservoir with a capacity of 521 MCM and Kaluganaga with a capacity of 144 MCM , construction of its water conveyance system for the irrigable area and power house with 20 MW installed capacity, implementation of the resettlement plan and the environment management Plan. The estimated total project cost is US\$ 557 million. (Rs.64, 358 million). The project commenced in 2007 and the total expenditure made by the end of December 2011 was Rs.4, 650 million.

Moragahakanda Reservoir head works mainly comprises with construction of three dams, main dams and two saddle dams.

Saddle Dam No 02 was completed utilizing the domestic fund at a total cost of Rs. 131.88 million, cost incurred during 2011 was Rs. 8.7 million. 2011 work programme was scheduled assuming JICA funds would be available before March 2011. However, as expected foreign fund Rs.771 million was not arranged, anticipated physical progress including the dam investigation and design works were unable to accomplish within the year.



Moaragahakanada Saddle dam 2

The negotiations were commenced with China Development Bank (CDB) to obtain required foreign funds and Memorandum of Understanding (MOU) was signed with Sino Hydro Corporation Limited. Accordingly, the Proposal for financial and construction methodology was received and the evaluation process was in progress by the Cabinet Appointed TEC. It is expected to award the contract by Mid-2012.

Kaluganga Reservoir Headwork's includes three components, main dam, saddle dam, and transfer canal and the tunnel route.

The financial assistance is expected through a consortium of funding agencies as US\$ 37 million from Kuwait Fund, US\$ 46 million from Saudi Funds and US\$ 16 million from OFID ( OPEC Funds for International Development) , to the total of US\$ 99 million for the Kaluganga Development.

Detail investigation and designing of reservoir head works, transfer canal and tunnel were completed in 2011 utilizing 3.65 US\$ million.

Evaluation of bids received for consultancy service for contract supervision was in progress. Construction contract for Kauganga with the total estimated cost of Rs 133 million to be awarded in 2012.

Downstream Development Works were in progress. It includes two resettlement sites namely system F coming under Kaluganga resettlement (3000Ha) and System D under Kaudulla LB extension area (2000Ha).The development work consists of land acquisition, resettlement, land development, construction of irrigation network, access road, provision of necessary social infrastructure facilities and environment conservation and management.

### **Survey works**

Surveying works were in progress in resettlement areas. Setting out of 16.3 km of distributary canals and field canal network under 3 tanks in Kaluganga Resettlement Area has been completed.

Strip surveying and setting out of 2.15 km branch canals under Thorapitiya Tank, 5 km of Kaudulla branch canal has been completed. Blocking Out Plans (BOP) for the blocks of Gamunupura, Dharshanapura, Samagipura and Attabe oya were completed during the year.

## Building construction

The construction works of Guruwela Block Office and 4 quarters have been virtually completed at the end of 2011. Construction of Office complex at Heerati Oya in Kaluganga resettlement area was in progress. Arrangements were made for the electricity supply to the Guruwela village center and to the model farm.

Provision of utility facilities to Moragahakanda office premises was completed during the year. Construction works of 13 buildings in the Bissopura Block Office complex was in progress.



Construction of Guruwela Block Office



Moragahakanda Office Premises

## Road Construction

The project continued the balance road construction works of Kaluganga Bridge to Guruwela main road 10 km. about 70% work has been completed in the Bridge cum Spill way for Wattuwatenna Tank.

Laggala to Herati Oya Market Road (4.5 km) was in progress and Nikawatura Bridge along the road was completed 95 %.

Balance work of Moragahakanda- Kumbiyangaha Ela Deviated Road (13.5km) has been almost completed. The road construction work from Amban Ganga Bridge to Thorapitiya – (9.13 km) in Klaganga Left Bank was commenced. The road widening from Thorapitiya Tank to Wellawela (5 km) and the balance work of road construction from Wellawela to Kaluganga Bridge was ongoing.

Construction work of the balance road works construction in Kaudulla System D has been commenced.



AmbanGnaga – Moragahakanda Road



Construction of  
Moragahakanda- Guruwela Road



Construction of Amban Ganga Bridge

### **Land and Irrigation Development**

Jungle clearing of 100 ha in the Right Bank of Kaluganga was completed. The construction of irrigation networks of Tank No 3 to 10 was progress.

240 ha of jungle clearing were completed in Kalu Ganga Left Bank. Balance work of Thorapitya Tank and the construction of its canal network was completed 70%.

Earth works of 1.3 km in the Kaudulla LB Canal extension (5.0km) has been completed 60 %. Rehabilitation works of 6.5 km of Kaudulla existing main canal was, also in progress. Improvement of two village tanks Sudagehenpitiya Tank and D8Wewa were completed.



Construction of Tanks and water conveyance system in Klaufnaga resettlement area

### Land Acquisition and Resettlement

Land acquisition and compensation activities were in progress. Awareness and training programs and number of community development programmes were conducted for the resettlers of Kaluganga and Medirigiriya.

221 families in the Thalagoda GN Division have been planned to settle immediately for the commencement of dam construction activities of Moragahakanda Project. Accordingly land allotments are being finalized to hand over to new settlers by the mid-2012.

52 No of families in Karandamulla GN Division were planned to resettle immediately for the commencement of Kaluganga dam construction work.



Participatory Rural Approach in resettlement activities

### Environment clearance & impact Mitigation

It was allocated as Rs 100 Mn for Kaluganga and Rs 40 Mn for Moragahakanda for the year 2011 on the environment clearance and impact mitigation component. Rs.96.7 was utilized over its environment management activities of buffer zone development in watershed area, forestry

development, soil conservation measures, habitat enrichment, agriculture and farm development, community awareness and training programmes etc.



Agriculture Development in Guruwela Farm

## Domestic Funded Projects

### 1. Mahaweli Consolidation Project

The project was instigated to rehabilitate the irrigation network of Maduru Oya Left Bank, water supply schemes and the infrastructure network in Mahaweli system B that was built in 1982-1986. It has already renovated 65 km of main canals, 31 km of branch canals, 129 km of distributary canals, and 310 km of field canals, rehabilitated of 227 km of road network and three community water supply schemes at the end of the year 2011.

The project contributes to community livelihood development through, livestock development, inland fishery development, agriculture productivity enhancement and homestead development. Accordingly the project distributed 421 of cattle among Mahaweli farmers, established 37 Pasture plots, assisted in constructing 619 of cattle sheds and 3730 of poultry units and conducted 142 of training programmes in cattle framing and poultry management. It released about 4.2 million of fingerlings in to small tanks. It supported in establishment of 32 table fish culture ponds, 1616 ornamental fish culture ponds and 4 inland breeding ponds and conducted 4 training programmes in order to support the community to enhance their income level through inland fishery development.

Its activities are further extended to demonstrate agro technical guidance and make free issues of high yield seed varieties and plant materials for Mahaweli farmers through the operation of Aralaganvila seed production farm. Maintaining soil fertility level through promoting organic fertilizing is highly attained in its sustainable agriculture development programme. The budget allocation for 2011 was Rs 500 Million of which Rs 421.09 Mn was utilized.



Rehabilitation of water supply scheme,  
road network and irrigation network

## 2. Riverine Bamboo Project

The project is implemented with the objective of preservation of the catchment and the water quality of Mahaweli river basins and reservoirs, by improving the vegetation cover along the river and reservoir banks. Minimizing the soil erosion and associated risks on riverbanks through promotion of bamboo cultivation is the main component of the project. Accordingly the management of tissue culture laboratory and plant nursery is the key task of the project.

For the year 2011, the project expended Rs. 18.79 Mn on laboratory management, plant nursery maintenance, planting programmes etc. During the year it produced 300,776 of bamboo plants and 2,083 of other plant varieties and issued 120,147 of plants for planting programmes along the river banks. About 8 training programmes were conducted to encourage the public in implementing successful planting programmes



Operation of tissue culture Laboratory,  
nursery maintenance and bamboo cultivation

The programmes leads to promote the bamboo related industries as a sustainable revenue stream for Mahaweli entrepreneurs.

### 3. Special Dairy Development Project – system C

This project was initiated in 2007 to increase milk production in system C and thereby raise the income status of Mahaweli dairy farmers. Total estimated cost is Rs. 120 million. Budget allocation for the year 2011 was Rs10 Mn of which Rs 7.33 Mn was disbursed among the activities of distribution of heifers, assisting to the construction of cattle sheds, training on dairy management, veterinary and Artificial Insemination services, managing animal breeding canter and rearing

centers, awareness and publicity programmes etc. It distributed 77 of upgraded animals among the farmers, and exchanged 192 of heifers from existing cattle in the system and supported to construct 152 of cattle sheds during the year.



Dairy Framing in System C

#### **4 Introducing New Trade Crops**

The project was launched to promote high value commercial crops in Mahaweli areas. Suited commercial crop varieties such as dragon-fruit, grapes, orange, pineapple, mango, banana etc. are introduced, plants materials are distributed and agro-technological guidance is demonstrated to Mahaweli farmers. Budget allocation for the year 2011 was Rs. 5 million of which Rs. 3.8 million has been utilized over the programme.



Introducing new trade crops in Mahaweli areas

#### **4. Small and Medium Scale Entrepreneurship Development on Mahaweli areas.**

As a strategic intervention for sustainable rural economic development, Mahaweli development programme is mostly encouraging the entrepreneurship development among Mahaweli settlers. Therefore, its entrepreneurship capacity building programmes almost lead to skill development, technology guidance and investment management.

Accordingly the project in collaboration with Regional development Bank, provides micro credit facilities for Mahaweli settlers who are motivated in enterprising. The programme allocated Rs 50 million for the year 2011 of which Rs 28 million was utilized for issuing 74 agriculture development loans, 39 livestock related development loans, and 101 of other service and house hold industry related loans. 26 numbers of programmes were conducted to promote food processing industries within Mahaweli areas.

#### **Administration of Mahaweli areas**

- **Administration of Mahaweli systems**

Mahaweli Authority of Sri Lanka manages water for 175,000 ha of irrigation lands, maintenance of 9,800 km of irrigation network, 8 large reservoirs, over 400 minor reservoirs and 800 km of road network in 10 Mahaweli systems. (System - B,C D,G,H,L, Uda Walawe ,Huruluwewa, Victoria and Kotmale.) The administration activities are extended to providing services and facilities for post settlement development such as, agriculture extension and productivity enhancement, livestock and

inland fishery development, entrepreneurship capacity building, land administration, human resources and institutional development, socio cultural development, environment conservation programmes etc. The budget allocation for administration of Mahaweli systems and divisions for the year 2011 was Rs.1, 095 million. The expenditure incurred at the end of the year was Rs 798.07 million.

Financial allocation for the year on headwork's administration, operation and maintenance of major reservoirs and power plants including improvement to water supply schemes, building and structures, plant and machinery was Rs 175 Million of which Rs 130.8 million was employed.

#### ▪ **Land Administration**

During the year MASL alienated 1031 homesteads and 189 paddy lots under the Land Development Ordinance.

And it issued 4763 of permits and 7334 grants including both highland and irrigable under the same ordinance.

Under the crown land ordinance, 800 of lots for housing and 143 lots for commercial purposes were alienated. Annual permits were issued as 493 lots for housing purpose, 411 lots for commercial purposes and 23 lots for industrial purposes. Long-term leases were offered for 88 lots for housing and 81 lots for commercial and industrial purposes.

Annual rent collection was Rs 123.55 million. Land division has organized 48 no of land Kachcheries and attended for transferring land ownerships regarding 2080 no of high lands and 814no of irrigable lots during the year.

#### ▪ **Agriculture Enhancement Programme and cultivation progress**

Agriculture Productivity Enhancement of Mahaweli areas is among key objectives of present Mahaweli programmes. Using high yield crop varieties and plant materials, advanced water management practices and agro technology, organic fertilizing and commercial oriented farming methodology are being regularly guided under Mahaweli agriculture extension programmes .

Additionally the establishment of 50 large-scale Mahaweli farms is proceeding to cater the Mahaweli farmers through demonstrations and high quality seed supply. Homestead development, commercial crop cultivation and organic farming are highly promoting among Mahaweli farmers to raise the farmer income through agriculture production. During the year it supported to develop 9560 number of homesteads and 8270 number of compost units.

For the year 2011, it has utilized Rs 92.6 Mn on agriculture productivity enhancement Programme.

In 2010/2011 Maha season, the cultivated paddy extent in Mahaweli areas accounted to 92,688 ha and the total paddy production was 329,808 Mt. That was 16.6 % of national production and other field crop production was 132,220 Mt. The average paddy production in Mahaweli areas was 4.43 Mt per Ha, which comparatively highly performs than the national average of 2.99 Mt per Ha. Flood damage occurred during the season has reasoned to bring down the expected paddy yield within Mahaweli areas.

The highest paddy average was reported in Udawalawa Mahaweli system that is 6.336 Mt per Ha in 2010/2011 Maha season as well as 6.529 Mt per Ha in 2011 Yala season.

In 2011 Yala season paddy cultivation extent in Mahaweli areas recorded as 82,425 ha and its total production was 459,423 Mt. The production of other field crops was 208,558 Mt.

Annual Mahaweli production of Paddy and field crops within the year 2011 was valued as Rs. 43,589 Mn.

#### ▪ **Livestock Development programme**

To raise the income level of Mahaweli farmers, introducing of livestock related revenue streams is highly attained in post settlement development activities. Promotion, facilitating and assisting for dairy farming, poultry management, goat farming, pig farming, and inland fishery and ornamental fish culture development are included in the programme. Establishment of market linkage for Mahaweli farmers to ensure domestic as well as export market is one of the key tasks of the programme.

Accordingly, the programme continues the training on proper management practices to maintain the productivity as well as quality of their production. It facilitates them by providing upgraded animals, programs for artificial insemination and veterinary services, assists in constructing animal sheds, establishing breeding centres, rearing centers, pasture plots etc.

During the year it expended Rs. 16.7 Mn over its programmed livestock management activities. It contributed to increase the Mahaweli dairy farmers by 750 in Mahaweli areas, and increased the cattle population by 1700. It assisted to construct 298 of cattle sheds and established 137 pasture plots. 166 no of training programmes were held with the total participants of 2046 no of farmers. Two bio gas units were established to demonstrate the recycling methods of animal waste in Mahaweli areas. The establishments of dairy units in each Mahaweli farms were proceeding. The annual milk production of Mahaweli areas was recorded as 19.9 Million liters.

Chicken production of Mahaweli areas in 2011 was around 3000 Mt and egg production was 3.9 million. During the year it increased the farmers involved in boiler production by 550, layer farming by 920 and back yard poultry farming by 6300.

The annual mutton production was 60 Mt, and during the year it increased the number of farmers involves in goat management by 1550. The goat population was resulted to increase by 16,000. Pork production of Mahaweli areas was about 66 Mts and the number of farmers involved extended by 134 during the year.

Annual Inland fish production in Mahaweli areas was 9687 Mt. 216 tanks within Mahaweli areas have been utilized for inland fishery. It distributed 278 no of gill nets and 16 numbers of boats among Mahaweli fishing community. Involvement on ornamental fish culture was resulted to increase by 370 families and 809 number of ornamental fish culture ponds were established during the year. 10 farmer training programmes were conducted on the ornamental fish culture development.

- **Human Resources and Institutional Development Programme**

Upgrading socio economic condition of Mahaweli settlers through entrepreneurship capacity building, institutional strengthening, women empowerment, socio cultural development and sports activities are major arenas of post settlement development activities. Accordingly human resources and institutional development division of MASL organizes various programems and workshops on its human resources development and institutional strengthening.

The programme utilized Rs 9.136 million for the year on capacity building of both Mahaweli settlers and the Mahaweli staff. Accordingly, during the year around 2000 programmes were conducted on capacity building, women development, and socio cultural development of the staff and offered 8 foreign scholarships for higher studies and professional training.

It offered 683 of settler training programmes, 4516 of institutional strengthening programmes, 516 women development programmes and 3738 of socio cultural development programmes for Mahaweli settlers. .

Empowering farmer organizations and make them responsible for the maintenance and operation of distributary canal, is one of the key task of the programmes. Maintenance of existing distributary canals handed over to 807 farmer organizations out of 985 farmer organizations. As a result, it was able to save Rs. 14 Mn. Maintenance expenditure during the year.

- **Forestry and Environment conservation programme**

The component includes the activities of soil conservation measures, tree planting programmes, gully conservations, catchment conservation, maintaining of plant nursery, water quality monitoring, environment education, sediment monitoring, maintaining of GIS database etc.

Within the year it proceeded 24 community forestry programmes, 18 stream bank conservation programmes, 25 number of gully conservations and 34 of environment education programmes. The programme resulted over establishment of 41,500 meters of soil conservation through biological and mechanical technology, production of 93,000 of valuable plant varieties, 34, 700 of free plant issues, around 2000 kg of vegetable and fruit production, 24, 000 kg of compost production, establishment of 500 of raised bed compost units at farmer field etc. It launched water quality monitoring programme within Mahweli areas, continue the operation of water hyacinth biological agent rearing unit and aquatic weed management programme. Updating of Mahaweli GIS data base for natural resource conservation and bamboo planting activities was progressed during the year.

▪ **Mini hydro power Projects**

Letters of Intends have been granted for construction of 19 mini hydropower stations in Mahaweli areas with a capacity of 59.5 MW of hydropower. Environmental Approval has been given for 14 projects of which work of seven projects have been already commenced. E.I.A approval process for another 5 projects was in progress. The power generation of Maduruoya Mini hydro power plant at the sluice gate was commenced.

## **C. Water Resources Board (WRB)**

### **Vision**

Adequate access to clean and safe water for all.

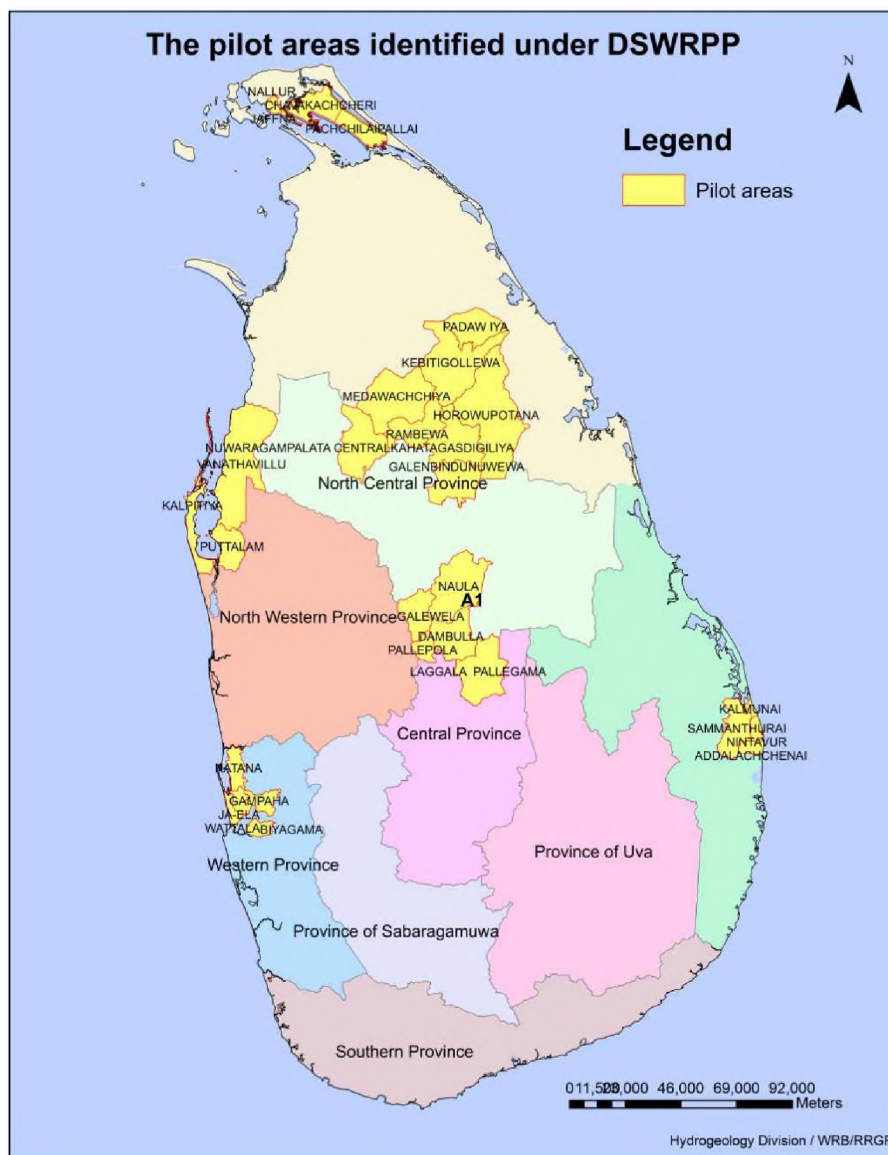
### **Mission**

To advise the government and the people on assessing, conserving, harnessing, developing and frugally utilizing particularly the finite groundwater resources in the country working in close collaboration with the rural society, relevant central and local government departments/ divisions/ authorities/ institutions, national and international organizations and scientific communities here and abroad.

## **Projects and Programmes implemented in 2011**

### **Groundwater Monitoring programme in identified pilot areas under Component 02 of the Dam Safety and water Resources Planning Project.**

Under the component 02 of the Dam Safety and Water Resources Planning project, Water Resources Board was engaged with groundwater monitoring programme at selected 30 DSD's of Jaffna, Anuradhapura, Puttalam, Matale, Gampaha and Ampara districts.



Pilot areas identified under DSWRPP

The DSD's were selected based on the issues identified in the respective areas by the Water Resources Board (table 01).

Pilot area	Issues	DSD's	District and Area (~Km <sup>2</sup> )
Area 1(A1)	Bacteriological and Extensive Agriculture pollution	Jaffna Town, Nallur, Chavakachcheri, Pachchilapallai	Jaffna peninsula 418
Area 2(A2)	Extensive agriculture	Kalpitiya	Puttalam 168
Area 3(A3)	Over extraction of ground water	Dambulla, Galewala, Laggala, Pallegama, Na ula, Pallepola	Matale 1200
Area 4(A4)	Kidney disease	Medawachchiya, Nuwaragam Palatha (central), Padaviya, kebithigollewa, Rambawewa, Horowpathana, kahatagasdigilya, Galenbindunuwewa	Anuradhapura 1990
Area 5(A5)	Industrial pollution	Gampaha, Ja-Ela, Wattala, Biyagama, Katana	Gampaha 376
Area 6(A6)	Salinity	Puttalam, Vanathavillu	Puttalam 1012
Area 7(A7)	Extensive Agriculture	Samanthurai, Kalmunei, Ninthavur, Adalachchenai	Ampara 343

#### Issues and selected DSD's

- (a) A workshop was successfully organized by the Water Resources Board on “Challenges in groundwater management in Sri Lanka” with the participation of 150 invitees from various organizations related to the water sector. Six number of technical papers were presented and the WRB web site was launched by the Hon Minister of Irrigation and Water Resources Management. Group discussions were held and the workshop proceedings were published.



Participants to the workshop



Launching the WRB web site by the Hon Minister

(b) The awareness programmes were conducted at Jaffna, Anuradhapura, Puttalam, Matale, Gampaha and Ampara districts.



Awareness programme at Jaffna.



Awareness programme at Matale District.

(c).The restructuring of the WRB data base was completed.

(d). Water sampling was done and Water quality assessment maps were prepared eg. Jaffna



Water sample collection at Jaffna

## 2. Hydrogeological study at Aruwakkaru

This project was started in May 2011 and the main objective of the project was to evaluate hydrogeological parameters of the limestone formation in Aruwakkaru area. Under this project, 13 Nos. of piezo and 05 Nos. of pumping wells were constructed. 09 observation wells were constructed. 04 Nos. of 72 hour pumping tests were conducted on the well fields and water samples were analysed.



Tube well drilling at Aruwakkaru

## 3. Groundwater development in Mannar district under JICA.

The main objective of this project was to implement 09 rural water supply schemes by using groundwater resources at 04 DSD's of Mannar district. The programme was started in May 2011 and under this programme, 17 Nos. production bore holes were drilled, pumping tests were conducted and water samples were analyzed. 11 Nos. of Pump houses were constructed and pumps and generators were installed.



Water sample collection & Conducting of a pumping test

#### **4. Water supply to the resettlement areas of the Mannar district under DMC funds**

Under the resettlement programme of the Mannar district 20 hand pump fitted tube wells were constructed. The programme was funded by the Disaster management centre.



Hydrogeological surveys at Mannar



Tube well drilling at Mannar

Project No 2, 3, 4 were successfully completed in 2011.

#### **Treasury Grant Projects**

##### **1. Hydrogeological study on coastal sandy aquifer extending from Colombo to Negombo.**

The main objective of the project is to assess groundwater availability, extraction rates and identification of pollution levels of the aquifer. At the final stage, a groundwater model will be developed for the aquifer. The project period will be two years and up to date 80 sites were investigated and 10 number of observation bore holes were constructed. Water samples were collected and chemical maps were prepared.

## **2. Awareness programme at Korakahawewa Training Centre**

For the year 2011, 11 awareness programmes were conducted for the government officers to aware them on water borne diseases.



Awareness programme conducted at the Training Centre,

## **3. Water Clinics**

Under this programme water samples were collected from dug wells in the villages of Anuradhapura district and analysed for fluorides. For the year 2011, 18 water clinics were held and 1904 samples were analyzed for fluoride.



Water clinic at Padaviya

## **04. Development and conservation of selected springs in Anuradhapura district.**

This programme was started in the year 2010 and continued for the year 2011. Under this project 04 number of springs were developed and handed over to the people in respective areas. The details are given in table 02

No	Name of the Spring	Families benefited
01	Dombagaha Ulpotha, Kebithigollewa	400
02	Singhaya Ulpotha, Kebithigollewa	400
03	Yakalla Ulpotha, Galenbindunuwewa	200
04	Kosgaha Ulpotha, kekirawa	200



After conservation of Dombagaha  
Ulpotha (spring)

#### **5. Water quality changes in aquifer system and identification of zones with hazardous mineral containing water in Anuradhapura district.**

The main objective of the project is to monitor the quality of water in deep and shallow aquifer system of Anuradhapura district. Analysis are mainly concentrated on Fluorides, hardness of water, heavy metals and pesticides. Water samples were collected and analysed. Geo chemical maps were prepared.

#### **d. Central Engineering Consultancy Bureau (CECB)**

##### **Introduction**

Central Engineering Consultancy Bureau (CECB) was established on 10th April 1973 under the State Industrial Corporations Act No.49 of 1957. Presently attached to Ministry of Irrigation & Water Resources Management, CECB has been in existence for over 38 years operating as a Self Finance Semi Government Organization, which is primarily involved in Consultancy, Construction and Turnkey Engineering Projects. Our main source of revenue is generated by carrying out projects for various clients both private and government in Sri Lanka as well as in countries like India, Maldives, UK, Rwanda, Tanzania and Malawi in the areas of Infrastructure developments (access roads, bridges, buildings and water supply), Hydro Power and Irrigation projects, Port and Coastal, Environment studies etc. CECB's success in these areas has been due to multi-disciplined professionalism, flexibility, precision, realistic and timely delivery.

Being the biggest body of professionals under one roof the CECB offers a considerable opinion on all fronts-for engineering work. Use of state of art technology, green design concepts and deliver fast track solutions to professional quality standards has placed CECB as the leader of engineering expertise in Sri Lanka. Ability to deliver more than promised, has been the key to establishing a satisfied client base of state and private institutions which continues to be tower of strength to CECB. The prospect for future growth for CECB is very strong with projects both in pipeline and new.

##### **CECB's Vision**

“To be a World Class Engineering Organization”

##### **CECB's Mission**

To be a World Class Sri Lankan Engineering Organization, acquiring excellence in Engineering, Architecture and Quantity Surveying, utilizing state of the art technology, with a highly motivated, trained and skilled workforce rewarded appropriately for their contribution in the optimum use of resources for the maximum benefit to mankind.

### **CECB Aim's to ....**

1. Continuously improve the quality and efficiency of services provided
2. Diversify the Product Portfolio
3. Introduce innovative technologies
4. Develop a world class Human Resource base
5. Achieve international recognition
6. Develop Information Technology as a strategic resource
7. Promote sustainable development

### **Locations**

CECB currently has 12 Base Offices including the Head Office. In addition to this, 30 Project Offices widespread in Sri Lanka supports timely delivery of projects. Further, with our international involvement, CECB has expanded to counties like UK, India, Maldives & East African countries.

## **CECB's Specialized Areas**

CECB is capable of providing Engineering services in the following areas.

- |                             |   |
|-----------------------------|---|
| - Hydro Power and Energy    | - Building Services                                 |
| - Hospital Development      | - Power Transmission and Distribution               |
| - Architectural Services    | - Water Resource Developments                       |
| - Structural Designs        | - Technical Audit / Dam Safety                      |
| - Quantity Surveying        | - Electrical & Mechanical Work                      |
| - Roads and Bridges         | - Land Surveying                                    |
| - Railway Works             | - Geo-technical Investigation & Laboratory Services |
| - Port/ Coastal Works       | - Environmental Studies                             |
| - Airport Development       | - Project Management                                |
| - Water Supply and Drainage | - Information Technology (IT)                       |

CECB has 3 separate divisions' i.e. Consultancy Division, construction (EPC) Division and International Division carrying out various services in the above sectors.

## **Recent CECB Achievements**

- "LMD (Lanka Monthly Digest) STATE 20" Rankings:
  - ✓ 10<sup>th</sup> in year 2010
  - ✓ 12<sup>th</sup> in year 2009 & 2008
- Award for the Best Engineering Services Provider – The Institute of Incorporated Engineers, Sri Lanka (INCO) – June 2010.
- Honored Citizen 2010 – Municipal Council of Colombo

**CECB Recent Success Stories**

<b>Project Name</b>	<b>Scope</b>	<b>Project Cost LKR</b>
Kokawil Tower	Turnkey	200 million
Galle Bus Stand	Structural Designs & Construction	410 million
Uthuru Wasanthaya	Design & Construction Supervision of Camps for SL Army, SL Navy, SL Air Force, SL Police	10 Billion
Upgrading Southern Railway	Consultancy work	8,500 million
Economic Centre – Ratmalana	Turnkey	100 million
Designs of 40 Bridges for Southern Expressway	Consultancy project	1,640 million
Ceylon Petroleum Corporation	Consultancy	1,400 million
Upper Kotmale Hydro Power Project	Consultancy	36,000 million
Tele City Project at Ranminithenna, Thissamaharamaya	Construction	403 million



Kokawil Tower



Galle Bus Stand

## Recent International Works

Project Name	Country	Project Cost
Construction of Library Building	Republic of Maldives	LKR 139.5 million
Hulhumale' Road Construction	Republic of Maldives	USD 8 million
Residence and Chancellery for Deputy High Commissioner for Sri Lanka In Chennai	India	INR 216 million
Construction of 3 stories house for UK Ambassador	United Kingdom	LKR 600 million
East African Small Hydro Power Projects	Rwanda, Tanzania & Malawi	LKR 15.4 million
RAA Dhuvaafaru & AA Ukulhas Harbour Project	Republic of Maldives	LKR 1,200 million



Residence and Chancellery for Deputy High  
Commissioner for Sri Lanka in Chennai



RAA Dhuvaafaru Harbour

## 8. Ministry Involvement in Northern Development in - 2011

The Ministry has identified the enormous potential of irrigated agriculture in the Mannar District, hence established new Chief Residence Engineer Office in Murukkan to expedite implementation of on – going projects and plan and implementation of new projects. Earlier all implementation of rehabilitation of irrigation schemes of Mannar District were managed by RDI Vaunia. The funds are directly provided to CRE by the separate vote of the Ministry. The progress of works undertaken by CRE – SPIMD is given below.

Type of Work	DS area	Extent benefitted	Allocation In 2011 Rs. Mn	Expenditure Rs. Mn	Progress	Remarks
Restoration of Viyadikulam tank	Musali	1200acs.	80	57.4	25%	Contd in 2012
Improvement canals Giants tank			40	31	80%	Contd in 2012
Improvements to Akathimuruppu tank	Musali	6400acs	15	8.75	60%	Contd in 2012
Paddy land clearing in Giants/Viyadikulam		283 ha	10	8.5	100%	
Construction of quarters in Murukkan			4.0	3.5	80%	Contd in 2012
Demo : Farm Micro irrigation			1.0	0.5	50%	Contd
Toatal			150	109.65		

In addition to the above works, Irrigation Department, Sri Lanka Mahaweli Authority and Water Resources Board have carried out several projects and programmes in Northern Development under other funding sources such as ENReP, ReAP, RAP, UNICEF, JICA, DMC... etc.

## **9. Performance of projects in pipeline – 2011**

### **Lower Malwathu Oya Reservoir Project**

It is proposed to construct a storage reservoir to regulate the flow of lower part of Malwathu Oya in order to provide reliable water deliveries to Giant Tank and Akathimuruppu scheme in Mannar District cultivating about 10,000 Ha and 2,500 Ha of paddy lands respectively. This reservoir with capacity of 300 MCM will further provide water for urban water supply scheme of Cheddikalam Township and 1000 Ha of new lands for irrigation in the immediate downstream.

A request has been sent to Central Environment Authority (EIA) with the project details and the duty field “Basic Information Questionnaire” to obtain Environment Approval. A preliminary meeting was held by the Central Environmental Authority with the participation of relevant line Agencies and requesting to submit the consent of the Agencies (Department of Forest) to the whom the land belongs to initiate the EIA approval process.

Ministry of Irrigation and Water resources Management has requested the consent of the Department of Forest by submitting the project details and awaiting their consent to proceed with the EIA approval process.

### **Gin Nilwala Transbasin Diversion Project**

In Southern Province Gin Ganga and Nilwala Ganga Basins receive an average rainfall of 3,000 mm annually and flows to the sea without making much use of this water while causing flood damages in the low lying areas in Galle and Matara Districts. Therefore, these excess water resources of two basins are planned to be diverted to provide supplementary flow to South East Dry Zone.

The feasibility studies have been entrusted to Chinese Consultants (CAMCE) and the Interim Report has been submitted.

Engineering Surveys in the project area was commenced but had to abandon half way due to objections of affected in the people in the Nilwala basin as with construction of proposed two reservoirs.

**Yan Oya Reservoir Project**

It is proposed to construct a reservoir having a capacity of around 250 MCM across Yan Oya at Pangurugaswewa village close to existing Wahalkada Tank in Anuradhapura District.

It is proposed to provide supplementary irrigation facilities for existing paddy lands under Padaviya scheme, Wahalakada Scheme, Lower Yan Oya anicut schemes and few lands under minor schemes totaling 1850 Ha and 100 Ha of new lands by LB canal. The proposed RB canals in Trincomalee District will provide water for 1000 Ha of lands under number of minor schemes.

The reservoir full supply level was reduced by 02 meters to minimize inundations with the requests of affected groups. The survey Department has been requested to establish the new high flood level contour (36.5 m) in the ground, and demarcate the new reservoir bed area

The EIA study is being carried out on the Revised Reservoir Parameters and the final EIA report is expected by 9<sup>th</sup> April 2012.

**System B Maduru Oya Right Bank**

It is planned to develop lands in Maduru Oya Right Bank in the Eastern Province utilizing available diverted water from the Mahaweli River under Mahaweli Development Master Plan. Initially though it is proposed to develop about 14,500 ha of irrigable lands, by considering the requirement of elephant corridor, about 4,500 ha of lands have been kept as forest reserves. Then the area available for irrigation purpose with settlement is about 10,000 ha and it is hoped to uplift the living standard of those settlers in the project area giving them all the facilities benefitted by the people settled in other Mahaweli areas.

In December 2011, Consultancy Contract has been awarded to modify the original structure plan of Right Bank by giving due consideration to proposed forest reserve and commercial land to design the canal system, infrastructure facilities and to prepare the Total Cost Estimate for Right Bank Project.

**Development of Mahaweli System L (Weli oya) kivul OYA**

System L is one of the irrigation systems with an extent of 163,393 ha located in the districts of Mulathive, Trincomalee, Vavunia and Anuradhapura has been identified in the Mahaweli Master Plan for future development through NCP canal.

The project area is located in between Padaviya tank and Kokilai lagoon in part of North Central, Eastern and Northern Province of Sri Lanka. System L has been divided in to nine Zones. There are

seven Zones on the Left Bank and two zones on the Right Bank of Ma Oya under the command of Padaviya Reservoir.

It is expected to raise the living standards of 6000 farmer families in System “L” through development of 2240 ha of irrigable land providing irrigation water by renovation of 56 village tanks within the basin by end Year 2015 by this Project.

Abounded 56 tanks which have not been fully utilized so far could be utilized for improving the living condition of 6000 farmers who have been living below poverty line. This will generated direct benefits and create multiplier effects in the region.

Geological Investigations along the Dam axis is now Completed.

A request has been sent to Central Environmental Authority (CEA) with the project details and the duty filled “Basic Information Questionnaire” to obtain Environmental Approval. A scoping meeting was held by the CEA with the participation of the relevant line agencies and request to submit the consent of the Agencies (Department of Forest) to whom the land belongs, and the clarification at the inter-ministerial level for use of forest area for reservation construction to commence the EIA process. Ministry of Irrigation and Water Resources Management has requested the consent of Department of Forest by submitting the project details and awaiting their consent to proceed with the EIA approval process.

### **Water Resources in Kalu Ganga Basin and Flood Protection**

The Ministry has entered into a Memorandum of Understanding (MOU) with TAHAL Engineering Ltd, in Israel, for the above purpose in January 2009. The Development work will take place in three phases.

- i. Full feasibility study for Rathnapura reservoir.
- ii. Installation and calibration of the flood protection management model
- iii. Water Resources development study for the entire basin.

The Consultants have now mobilized and the prefeasibility study in the whole “Kalu Ganga” basin is going on.

The consultants also carrying out the prefeasibility study to identify the possible locations for reservoirs.

## **Pre-feasibility Study on NCP Canal Project**

In the original Mahaweli Master Plan, the existing major schemes together with new irrigation reservoirs proposed in the North Central Province (NCP) and Northern Province (NP) are to receive Mahaweli water through the NCP canal planned to take off immediately below the proposed Moragahakanda reservoir to provide irrigation waters to 50,000 hectares of existing and 100,000 hectares of new lands in systems I.J.K.L. & M. Further in the same programme, it is proposed to improve the existing Minipe LB canal and extend it up to Angamedilla and beyond feeding all Polonnaruwa systems and ending up in Kantalae tank to capture and divert Mahweli waters spilling over Minipe anicut during peak power generation times of the Rantambe reservoir. Once this water is diverted to Pollonnaruwa systems, then part of the water in the Moragahakanda could be utilized for the irrigation systems to be taken up under the NCP canal. The water available presently in the Moragahakanda reservoir is adequate only to provide irrigation waters up to Mahakandarawa tank.

The consultancy contract awarded last year for pre - feasibility study to review the NCP canal project of Mahaweli Development programme as a solution to scarcity of irrigation and drinking water in North Central Province, Northern Province and upper Mi Oya Basin in Western Province, has been completed in mid of year 2011. In this study water availability for development of NCP canal has been assessed taking into consideration already developed and proposed development projects and balance water resources available in the Mahaweli Basin along with in basins development in the NCP project area. The pre - feasibility study has revealed that 1100 MCM could be harnessed for utilization in NCP and NP target areas and 100 MCM for upper Mi Oya basin.

In December 2011, four consultancy contracts have been awarded to MCB for further studies of following components of NCP Canal project.

1. Modification to configuration of Moragahakanda - Kalu Ganga Project to integrate NCP canal Project layout.
2. Feasibility study of raising of Minipe Anicut and Rehabilitation of Minipe left Bank Canal
3. Feasibility Study for Diversion of Mahaweli Water to upper Mi Oya and Hakwatuna Oya Basin in Kurunegala District.
4. Feasibility Study on Proposed Randenigala Kalu Ganga. Transfer Canal Complex en route Haslaka and Heen Ganga together with Lower Uma Oya Complex with a Comprehensive Hydrological/Water Balance Study.