FRAMEWORK FINANCING AGREEMENT
(SRI: Mahaweli Water Security Investment Program)

Parties

This Framework Financing Agreement (FFA) dated 23 April 2015 is between the Democratic Socialist Republic of Sri Lanka ("Sri Lanka"), and Asian Development Bank (ADB).

MFF Investment Program

Sri Lanka is committed to and will implement the Mahaweli Water Security Investment Program (Investment Program), which is an integral part of Sri Lanka's investment plan for the North Central Province Canal Program (NCPCP). Both the NCPCP and Investment Program are described in Schedule 1 hereto.

The total cost of the NCPCP over the period 2014 to 2024 is expected to be $1.64 billion equivalent. The total cost of the Investment Program over the period 2015 to 2024 is expected to be about $675 million, equivalent.

Multitranche Financing Facility

The Multitranche Financing Facility (Facility) is intended to finance projects under the Investment Program, provided that such projects comply with the criteria set out in Schedule 4 hereto and that understandings set out in this FFA are complied with.

These may include:

(i) The Upper Elahera Canal Project (UECP) comprises two components. The first component is the 9 kilometer (km) Kaluganga-Moragahakanda Transfer Canal (including a 8 km tunnel) that transfers water between the Kaluganga and Moragahakanda Reservoirs. The second component is the Upper Elahera Canal that connects the Moragahakanda Reservoir to the existing reservoirs (Huruluwewa, Manankattiya, Eruwewa and Mahakanadarawa) via 82 km of canals (including in total 28 km of tunnels). These reservoirs supply existing irrigation and water supply schemes.

(ii) The North Western Province Canal Project (NWPCP) will construct 96 km of new and upgraded canals (including a 940 meter (m) tunnel) and two new 25 m tall earth gravity dams impounding the Mahakithula and Mahakirula Reservoirs. It will transfer water from the Dambulu Oya River and the existing Nalanda and Wemedilla Reservoirs to command existing irrigation and water supply reservoirs.

(iii) Minipe Left Bank Canal Rehabilitation Project (MLBCRP), located in the downstream reaches of the Mahaweli River, will: (a) add upstream storage by heightening the headwork's weir by 3.5 m, (b) construct new intake gates to the left bank canal and emergency spill weirs to both left and right bank canals; and (c) rehabilitate the 74 km Minipe Left Bank

Canal to improve conveyance and reliability of service to existing farmers**.**

This FFA does not constitute a legal obligation on the part of ADB to commit any financing. At its sole discretion, exercised reasonably, ADB has the right to deny any financing request made by Sri Lanka, cancel the uncommitted portion of the Facility, and withdraw Sri Lanka's right to request any financing tranche under the Facility. Financing tranches may be made available by ADB provided matters continue to be in accordance with the general understandings and expectations on which the Facility is based and which are laid out in this FFA.

This FFA does not constitute a legal obligation on the part of Sri Lanka to request any financing. Sri Lanka has the right not to request any financing under the Facility. Sri Lanka also has the right at any time to cancel any uncommitted portion of the Facility.

Sri Lanka and ADB may exercise their respective rights to cancel the Facility or any uncommitted portion thereof, and ADB may exercise its right to refuse a financing request, by giving written notice to such effect to the other parties. The written notice will provide an explanation for the cancellation or refusal and, in the case of a cancellation, specify the date on which the cancellation takes effect. ADB may cancel the Facility or reject a financing request when there is a material noncompliance with ADB policies or FFA undertakings; or there are undue delays in the submission of the financing requests or the implementation of the Investment Program.

Financing Plan

The financing plan for the Investment Program is summarized below.

Financing Source	Total ($ million)	Share of Total (%)
Asian Development Bank	453	67
Cofinancing	114	17
Government of Sri Lanka	108	16
Total (Investment Program)	**675**	**100**

Financing Terms

ADB will provide loans to finance projects under the Investment Program, as and when the projects are ready for financing, provided, Sri Lanka is in compliance with the understandings hereunder, and the projects are in line with those same understandings. Each loan will constitute a tranche.

Each tranche may be financed under terms different from the financing terms of previous or subsequent tranches. The choice of financing terms will depend on the project, capital market

conditions, and ADB's financing policies, all prevailing on the date of signing the legal agreements for such tranche.

Tranches may be provided in sequence or simultaneously, and some may overlap in time with each other.

Commitment charges or guarantee fees are not payable on the Facility. They are payable only on financing actually committed by ADB as a loan or guarantee. ADB rules on commitment charges and guarantee fees, which are in effect when the legal agreements are signed for a tranche, will apply with respect to such tranche.

Amount

The maximum financing amount available under the Facility is four hundred and fifty three million US dollars ($453,000,000). It will be provided in individual tranches from ADB's Ordinary Capital Resources[1] and Special Funds Resources[2] in the following manner: loans.

Availability Period

The closing date of any loan or cofinancing under any tranche will be on or before 31 December 2024. The last financing tranche is expected to be executed no later than 31 December 2020.

Terms and Conditions

Sri Lanka will cause the proceeds of each tranche to be applied to the financing of expenditures of the Investment Program, in accordance with conditions set forth in this FFA and the legal agreements for each tranche.

Execution

The Executing Agency will be Ministry of Mahaweli Development and Environment (MMDE). The Executing Agency will implement the Investment Program in accordance with the principles set forth in Schedule 1 to this Agreement, and as supplemented in the legal agreements for each tranche.

Periodic Financing Requests

Sri Lanka may request, and ADB may agree, to provide loans under the Facility to finance the Investment Program and its related projects upon the submission of a Periodic Financing Request (PFR). Each PFR should be submitted by Sri Lanka. Sri Lanka will

[1] Provisions of the Ordinary Operations Loan Regulations applicable to LIBOR-Based Loans Made from ADB's Ordinary Capital Resources, dated 1 July 2001, would apply to each Loan, subject, to modifications, if any, that may be included under any Loan Agreement (said Ordinary Operations Loan Regulations as so modified, if any, being hereinafter called the Loan Regulations).

[2] Provisions of the Special Operations Loan Regulations applicable to Loans Made by ADB from its Special Funds Resources, dated 1 January 2006, would apply to each Loan, subject, to modifications, if any, that may be included under any Loan Agreement (said Special Funds Loan Regulations as so modified, if any, being hereinafter called the Loan Regulations).

make available to MMDE the proceeds of the tranche in accordance with the related PFR, and the legal agreements for the tranche.

Each individual tranche will be for an amount of no less than one hundred million US dollars ($100,000,000), or its equivalent. ADB will review the PFRs and, if found satisfactory, prepare the related legal agreements.

The projects for which financing is requested under the PFR will be subject to the selection criteria set out in Schedule 4 hereto, satisfactory due diligence, and preparation of relevant safeguard and fiduciary frameworks and other documents. The Facility will be implemented in accordance with the general framework set out in Schedule 3 to this FFA, and the Facility Administration Manual agreed between Sri Lanka and ADB.

Until notice is otherwise given by Sri Lanka, the Secretary to Treasury or the Director General of External Resources Department of the Ministry of Finance will be Sri Lanka's authorized representative for purposes of executing PFRs.

General Implementation Framework

The Facility will be implemented in accordance with the general framework set out in Schedule 3 hereto.

Procedures

Tranches to be provided under the Facility will be subject to following procedures and undertakings:

(i) Sri Lanka will have notified ADB of a forthcoming PFR in advance of the submission of the PFR.

(ii) Sri Lanka will have submitted a PFR in the format agreed with ADB.

(iii) ADB may, in its sole discretion, decline to authorize the negotiation and execution of any legal agreement for a tranche.

(iv) If ADB confirms acceptance of the PFR, the legal agreements will be negotiated and executed by the parties.

PFR information

The PFR will substantially be in the form attached hereto, and will contain the following details:

(i) Loan and cofinancing amount;

(ii) Description of projects to be financed;
(iii) Cost estimates and financing plan;

(iv) Implementation arrangements specific to the projects;

(v) Confirmation of the continuing validity of, and adherence to, the understanding in this Agreement;

(vi) Confirmation of compliance with the provisions under previous Loan Agreement(s) and Project Agreement(s), as appropriate; and

(vii) Other information as may be required under the Facility Administration Manual, or reasonably requested by ADB.

Safeguards

Attached as Schedule 5 are references to the Safeguard Frameworks that will be complied with during the implementation of the Facility.

ADB's Safeguard Policies in effect as of the date of signing of legal agreements for a tranche will be applied with respect to the projects financed under such financing tranche.

Procurement

All goods and services to be financed under the Facility will be procured in accordance with ADB's *Procurement Guidelines* (2013, as amended from time to time).

Consulting Services

All consulting services to be financed under the Facility will be procured in accordance with ADB's *Guidelines on the Use of Consultants* (2013, as amended from time to time).

Advance Contracting; Retroactive Financing

Under each tranche, ADB may, subject to its policies and procedures, allow on request (a) advance contracting of civil works, equipment and materials, and consulting services, and (b) retroactive financing of eligible expenditures for consulting services and procurement of goods, services and civil works, project management, and project administration up to 20% of proposed individual loan, incurred prior to loan effectiveness but not earlier than 12 months before the date of signing of the related legal agreement. Sri Lanka acknowledges that any approval of advance contracting and/or retroactive financing will not constitute a commitment by ADB to finance the related project.

Disbursements

Disbursements will be made in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time).

Monitoring, Evaluation, and Reporting Arrangements

Schedule 2 hereto sets as the Design and Monitoring Framework for the Investment Program, against which the implementation effectiveness will be evaluated.

Undertakings

Attached as Schedule 6 are the undertakings provided by Sri Lanka.

SRI LANKA

By _____
CHANDRA EKANAYAKE
Deputy Secretary to the Treasury

ASIAN DEVELOPMENT BANK

By _____
SRI WIDOWATI
Country Director, SLRM

SCHEDULE 1

MFF CONSTITUENTS

A. Road Map

1. Country Background

1. With a coastline of about 1,600 kilometer (km), Sri Lanka consists mostly of flat-to-rolling coastal plains, with mountains in the south-central core. The maximum length of the island (from north to south) is 435 km while the maximum width (east to west) is 240 km. The highest elevation is 2,524 meters (m) above sea level. The country occupies a strategic position near the main sea trade corridors between Europe and Asia, a factor which allowed Colombo to develop very early as an international port city and then subsequently as a trans-shipment point for cargo originating or destined for the Indian sub-continent.

2. Sri Lanka's population geography is dominated by settlements clustered along the coast and interior market towns that dominate the rural landscape.[1] About 85% of Sri Lanka's population (20.3 million in 2012) lives in rural and peri-urban areas, i.e., outside legally demarcated municipal jurisdictions. More than one-fourth of the population lives within one km of the coast, a strip of land constituting only 5% of the country's area.[2]

3. There is a long and rich history of construction of major water works, such as tanks for water storage, canals and anicuts for river diversion, over several millenniums[3]. Some of the more than 30,000 tank cascade systems for irrigation and drinking water supply have been in continuous service for the past 2,000 years. This history of water development and management is interlinked to the development of paddy rice production,[4] and the need for irrigation water particularly in the low lying areas and Yala season.[5] Modern day refurbishment of the ancient tanks that had fallen into disrepair, and development of agriculture were started during the colonial era, and expanded in the 1970s under the Mahaweli Development Program (MDP) (as discussed below).

4. Since the end of civil conflict in May 2009, a period of strong economic growth has been shared across Sri Lanka. The growth of the economy maintained at over 8% in 2010 and 2011, slightly slowed to 6.4% in 2012 due to weak external demand, drought, and floods, and then rebounded to 7.3% in 2013. It is envisaged that an improving external environment, higher investment, and a recovery in domestic consumption will sustain a rapid pace of economic growth in the next two years.[6] The expansion of Sri Lanka's economy has been largely driven by industry and services sectors, which account for 89% of gross domestic product (GDP), and

---

[1] Department of Census and Statistics, Ministry of Finance and Planning. 2012. Population Atlas of Sri Lanka 2012. Colombo.

[2] World Bank and UN Habitat. 2012. Turning Sri Lanka's Urban Vision into Policy and Action. Washington, D.C.

[3] The earliest archeological evidence dates from about 300 BCE, during the reign of King Pandukabhaya.

[4] Rice production is estimated to have started in Sri Lanka as early as 100 BC, http://www.araliyarice.com/paddy-cultivation/

[5] There are two principal monsoonal periods in Sri Lanka: the South West Monsoon (Maha season) from December-February, and North East Monsoon (Yala season) from May-September. These monsoon seasons also coincide with the cultivation seasons.

[6] ADB. 2014. Asian Development Outlook 2014: Fiscal Policy for Inclusive Growth. Manila.

followed by the agriculture sector contributing the remaining 11%.[7] The drivers of growth over the medium term are expected to be the same sectors that led growth since 2006.

5. Reflecting this robust growth, the national poverty headcount ratio fell to just below 9% in 2010 from over 15% in 2006/07. Poverty rates also declined across most of the country. Declining inequality has also accompanied poverty reduction. Nevertheless, less-developed areas did not exhibit consistently higher elasticity of poverty reduction (proportional change in poverty per unit growth in GDP per capita).[8]

6. Low agricultural productivity and farmer incomes have hindered the spread of economic improvements, particularly in Sri Lanka's northern and northwestern dry-zone areas. These areas are also susceptible to adverse impacts of anticipated climate change. The reliable supply of stored and transferred water from the country's southern wet-zone will support inclusive growth and poverty reduction going forward.

2. Sector Performance

7. While Sri Lanka has ample water resources, with an annual per capita endowment (ACE) of 2,600 cubic meters (m^3), these resources are not well distributed in time and space due to topography and monsoonal climate. The country is split between the wet-zone of the central and south west districts, and the dry-zone of the north and northwest. The wet-zone accounts for about 25% of the area, but 70% of the water resource; the dry-zone accounts for 30% of the water resources, but more than 80% of the water demand (predominately for irrigated agriculture).[9]

8. In the northern dry-zone districts,[10] the ACE is 1,200 m^3, which is well below the water stress level[11] (1,700 m^3) and predicted to decline to scarcity levels (less than 1,000 m^3) by 2025. There are also large seasonal differences with 80% of this resource occurring in the Maha season. These districts suffer from frequent droughts, especially in the Yala season, which severely impact irrigated agriculture production (and therefore household food security and incomes) and drinking water supplies (adversely affecting public health).

9. Currently, irrigated agriculture production is dominated by paddy. Cropping intensities vary between districts, zones and irrigation systems, ranging from close to 200% in the water rich districts to less than 130% in the water scarce northern and northwestern districts. Paddy yields are below potential levels of 6 to 7 tons per hectare (t/ha), and less than 4 t/ha in districts constrained by water availability. Water productivity is less than half potential values, at 0.33 kg/m^3 and \$0.05/m^3.

---

[7] Central Bank of Sri Lanka. 2013. Annual Report of the Monetary Board to the Hon. Minister of Finance for the Year of 2012. Colombo.

[8] International Monetary Fund. 2013. Sri Lanka: 2013 Article IV Consultation and Proposal for Post-Program Monitoring. Washington, D.C.

[9] International Water Management Institute (IWMI). 1999. *Water Scarcity Variations within a Country: A Case Study of Sri Lanka*. Research Report 32. Colombo.

[10] The districts include; Jaffna, Killinochchi, Trincomalle, Vuvaniya, Mullaitivu, Puttalam, Kurunegala, and Anurdhapura.

[11] ADB. 2011: *Water Operational Plan 2011- 2020,* October 2011. Manila.

3. Key Problems and Opportunities

10. Water productivity is constrained by a number of factors, which include generally low irrigation efficiencies due to high conveyance and operational losses, resulting in high application rates to meet irrigation demands. Productivity is also reduced by droughts, frequently in the Yala season, which further reduce the reliability of water supply and therefore yields. The high risk of droughts in both the Yala and Maha seasons makes farmers risk adverse, and therefore unwilling to diversify into non-paddy crops, with lower water requirements and higher returns and productivity.

11. The sector challenges are to increase productivity through improved crop yields and diversification to higher-value field and vegetable crops, particularly during the Yala season. There is potential to increase water productivity levels for paddy to closer to 1 kg/m^3 and through diversification increase returns to water (and land) to more than \$0.10/m^3.

12. Future climate change impacts are predicted to result in an increase in irrigation water demand, as a result of temperature rise, as well as a suppression of paddy yields at higher temperatures. There is also likely to be a shift in seasonal rainfall patterns, with a decline in Maha and increase in Yala rainfall, both accompanied by a higher frequency of storm events. These impacts could further exacerbate the water resources differential between the wet- and dry-zones, and increase the frequency and severity of droughts in the dry-zone. However, the impacts are also likely to increase water resources within the wet-zone areas, and therefore potential for hydropower production and/or inter-basin transfers.

13. The opportunity exists to improve the utilization of nationally ample, but spatially and temporally constrained, water resources to enable these productivity improvements to be achieved and to improve the security of drinking water supplies within the water scarce northern and northwestern districts and provinces.[12] This can be achieved through increased water harvesting, with the construction of additional storage reservoirs, and inter-basin transfer of water from the wet- to the dry-zone districts. It can also be enhanced and complemented through better water resources management at all hydrological levels, from river basin to field levels. Improved efficiencies, both conveyance and operational, would increase water productivity and water supply security and therefore water utilization.

14. The Mahaweli River is the largest and most water-rich river basin in the country with 20% of the country's total water resources. In the 1970s, the multi-sector MDP was initiated with the construction of a cascade of hydropower dams, transfer canals and irrigation systems. Under the original concept, it was proposed to provide water to new and existing irrigation systems with a total area of more than 360,000 hectares. While implementation of the program was 'accelerated', not all of the systems and areas where developed, as a number of them in the north and east were located within conflict-affected areas. The MDP currently supplies waters to 14 systems with a combined irrigated area of approximately 160,000 hectares. However, there are sufficient water resources remaining in the Mahaweli River for the transfer of 1,000 million cubic meters (MCM) of water to the north to increase the serviced irrigated area by 80,000 hectares and to supply 160 MCM to water short communities. These transfers would enable higher cropping intensities, with a more secure water supply, particularly for the Yala season, and support increased production of non-paddy crops to improve household incomes.

[12] The northern provinces are North Central, North Western and Northern.

15. The physical constraints to realizing the sector's full potential include the need for construction of large-scale infrastructure, dams and canals, to increase water availability, and for the improvement (rehabilitation and modernization) of transfer cascade irrigation systems (rehabilitation and modernization) to improve adequacy and equity of water deliveries. There are also a number of non-physical constraints, such as the need to improve multi-sector river basin management, cascade irrigation system operation and maintenance (O&M), and farming systems to optimize water productivity.

16. However, infrastructure design and construction must take into consideration potential environmental impacts, such as the use of tunnels and covered canals (as opposed to open canals) for water conveyance (as opposed to open canals) to avoid damaging wildlife habitat and movement (in particular movement of elephants). Also, the government's priority is for intensification of production, by increasing cropping intensity, within existing agricultural lands, to protect and preserve forests and areas for wildlife, in preference development new land.

B. Strategic Context

17. ADB's strategic sector objectives[13] are aligned with the government's principal development objectives of economic growth and reduction of poverty. The investment program will assist the government to address major constraints for sustaining inclusive economic growth, by supporting infrastructure development that improves connectivity and service delivery to lagging regions.

18. The investment program is also consistent with ADB's strategic and sector goals as articulated in (i) Strategy 2020; (ii) Water for All policy,[14] and (iii) Water Operational Plan 2011-2020[15] with objectives of reducing the water demand-supply gap in water scarce areas, fostering integrated water resources management, improving water governance and delivery of services, and improving resilience to climate change.

19. The ADB Strategy 2020 established three strategic agendas to guide its work up to 2020: (i) inclusive economic growth, (ii) environmentally sustainable growth, and (iii) regional integration. Water is common to each of these; in fact, it is central to their attainment. It is also integral to the Strategy's five drivers of change: (i) private sector development and private sector operations, (ii) good governance and capacity development, (iii) gender equity, (iv) knowledge solutions, and (v) partnerships. The Strategy focuses ADB's operations into five core areas that best support its agenda and reflect ADB's comparative advantages. One core area is infrastructure, where water management and irrigation are key elements.

20. The ADB Water Policy (Water for All) has seven key elements: (i) promoting a national focus on institutional reform; (ii) fostering integrated river basin management (IRBM); (iii) improving and expanding service delivery; (iv) fostering conservation; (v) promoting regional cooperation; (vi) facilitating the exchange of information and experiences, including public-private-civil society partnerships, and (vii) improving governance and promoting decentralization. The Policy recognizes that shrinking ACEs are leading to water stress and that remedies include (i) increasing irrigation efficiency (water consumption/withdrawal); (ii) reversing the degradation of water resources by agricultural, industrial, and municipal effluents; and (iii) improving the allocation and management of available resources at the river basin level.

[13] Country Partnership Strategy 2015-2016.
[14] ADB.2003. Water for All – The Water Policy for the Asian Development Bank. Manila.
[15] ADB. 2011. Water Operational Plan 2011-2020. Manila.

C. Policy Framework

21. In Sri Lanka, the government is the custodian of the island's water resources. The Ministry of Mahaweli Development and Environment (MMDE) and the Ministry of Irrigation (MOI) are the two main government agencies responsible for managing water resources. MMDE is responsible for formulation of policies, programs and projects in regard to subjects of development associated with the Mahaweli System, among other responsibilities. MOI is responsible for developing and managing the non-Mahaweli System water resources sector following an integrated water resources management (IWRM) approach to meet the water demands of all sectors. There are also a number of other state institutions functioning under other ministries that have responsibilities on water-related activities such as providing safe water supply, hydropower and ecological services, and each is also vested with multiple functions related to policy, regulatory, and conservation.

22. Under MMDE is the Mahaweli Authority of Sri Lanka (MASL) that was established in 1979 by Parliamentary Act with a mandate to implement the MDP. Presently, within the MDP gazetted areas, its tasks mainly comprise: (i) planning and developing outstanding MDP water infrastructure and irrigation systems; (ii) operation, maintenance and management of the MDP and associated irrigation systems; (iii) land administration; (iv) improving agricultural production; and (v) managing post-settlement activities. MMDE and MASL are currently implementing a number of large infrastructure development programs including the Kaluganga and Moragahakanda Reservoirs which are integral components of the North Central Province Canal Program (NCPCP), the World Bank supported "Dam Safety and Water Resources Planning Project", and the Uma Oya Development Project amongst others. Under MOI is the Department of Irrigation (DOI) which prepares programs and master plans for river basin development. The key objectives of DOI's mandate are: (i) to develop land and water resources for irrigated agriculture; (ii) hydropower; (iii) flood control; (iv) domestic and industrial usage; and (v) to enhance productivity of existing major and medium irrigation schemes. Both MASL and DOI are responsible for operation and maintenance of their respective systems, while minor tanks are the responsibility of Provincial Councils and Farmer Organizations.

23. Water use is prioritized under drought conditions, with drinking water supply assigned highest priority[16], followed by current irrigation demand (for planted crops); other uses are ranked lower. The management of water deliveries for irrigation is split between those systems managed by the MASL and those managed by the DOI. Within the Mahaweli System, water allocations and reservoir operation is managed by the Water Management Panel (WMP) under the leadership of MASL's Water Management Secretariat, which is charged with the responsibility of achieving the optimum benefits from both irrigation and hydropower generation. Key stakeholders represented on the WMP are MASL, DOI, Ceylon Electricity Board, Department of Agrarian Development, and Farmer Organizations. The WMP prepares and monitors operating procedures, and during droughts the prioritizing of reservoir operation and water allocations according to pre-defined operational rules. For other medium and major irrigation systems, DOI in collaboration with other key stakeholders such as the Department of Agriculture, Department of Agrarian Development and Farmer Organizations establish Project Management Committees which are responsible for coordinating and facilitating management, operation and maintenance for their respective systems.

[16] Essentially by default as drinking water supplies are generally maintained during drought conditions, while other uses are restricted.

24. This policy framework (management, legislation and regulation) is a legacy of Sri Lanka's long tradition of community- and district-led development and management of water resources for agriculture and community needs, as evident from the large number of tank cascade systems. It has been adapted over the past 100 years on an 'as needed' basis, largely to meet specific water development and management requirements; and it provided the basis for the MDP and other subsequent major developments. It also demonstrates that MMDE, MASL and DOI have sufficient capacity to implement, and thereafter operate, the infrastructure planned under this investment program.

25. However, there is an opportunity to improve this policy framework as currently there is no exclusive and formally approved water policy. Rather, there is presently over 50 laws related to various aspects of water and agriculture.[17] For irrigated-agriculture, the only governing law for irrigation in the country is the Irrigation Ordinance (1946) which was subsequently amended by Irrigation Acts (1983, 1990 and 1994) and supported by Paddy Lands Act (1958), Agricultural Land Law (1973), Agrarian Service Act (established 1979 and amended 2000 and 2011) and several others. The Irrigation Ordinance stipulates: (i) use of irrigation water through powers entrusted to farmer organizations and their duties; (ii) formation of Project Management Committee for major irrigation schemes and their powers/duties; (iii) constitution of District Agriculture Committee and its powers/duties; and (iv) operation and maintenance of irrigation schemes; (v) protection of irrigation schemes; and (vi) conservation of water, among others.

26. There were attempts at reforming the sector in the 1980s and 1990s; however, these were not successful. The 1980s attempts to 'modernize' the sector included proposals for legal water rights (sector bulk water allocations) and the collection of irrigation fees for O&M cost recovery. The latter marked a significant shift in policy away from the provision of water free of charge. In the 1990s an action plan was initiated for water policy (and institutional) reforms with donor assistance (ADB[18] and USAID[19]), to address critical factors for water resources development and management. A Water Resources Secretariat was set-up for the formulation of the national water policy. The proposed policy adopted modern holistic principles for water resources management and development. The reform program also included a new organizational setup, most notably the formation of a national apex organization, the National Water Resources Authority. However, while the proposed reforms offered an opportunity for significant policy and institutional rationalization, they ultimately failed to gain public support, and more importantly political backing. After widespread media attention and debate, they were ultimately withdrawal by the government.

27. There are a number of constraints with the current policy framework as outlined below.

28. **Legislative Shortfalls.** The multiple and fragmented legislation has created challenges for the proper regulation of water uses and development. The main challenge is the ambiguity of water rights and rights of water use, which can lead to competing and conflicting demands on limited water resources. The transfer of a number of water-related functions to the Provincial Councils occurred with the 13th Amendment to the Constitution; however, there is no provincial legislation related to water.

[17] Samad. 2004. *Water Institutional Reforms in Sri Lanka*. Water Policy 7, IWMI, Colombo.
[18] ADB, Comprehensive Water Resources Management Project (1992); ADB. Water Resources Management Project (2001).
[19] The USAID Irrigation Support Project for Asia and the Near East (1990)

29. **Water Resources Management.** Currently, there are around 40 national and provincial agencies responsible for one or more aspects of water management. This multiplicity of agencies operating in the water management sector, more or less independently of each other, has resulted in distortions and inefficiencies including: (i) no reliable and impartial mechanisms to allocate bulk water between sectors, which leads to inequities and uncertainties in allocations between the sectors; (ii) water for environmental and social needs is not fully safeguarded over other uses; (iii) water supplies for existing water users are threatened by the lack of control on new water use development; and (iv) a lack of flexibility of water allocation to allow voluntary transfers between users and sectors, which could increase overall water productivity.

30. **Irrigation Management.** The current policy and institutional issues that affect irrigation system performance include: (i) multiple overlapping of agencies (particularly the overlap in responsibilities between the DOI, MASL, Department of Agrarian Development, and Provincial Councils) involved in the construction, management and O&M of irrigation schemes, which is causing duplication and inefficient use of manpower and institutional resources; (ii) current irrigation system management, either farmers' led or jointly managed, has been partly successful and needs improvement for which adequate assessment is required to identify and address shortcomings or gaps; (iii) despite the ongoing reforms in the name of Participatory Irrigation Management / Irrigation Management Transfer, the O&M of irrigation systems is still being largely financed by the government; and (iv) a lack of incentives to attract private sector participation in irrigation investments.

31. **Strategic Vision for the Sector.** As outlined above, there is potential to improve the policy environment, particularly the ways and means by which water is managed and utilized to improve sector performance. The investment program will also entail additional challenges with the large-scale transfers of water to the north, and with it the need to manage this water within an expanded MDP service area and to optimize its beneficial use. The sector vision in the short-term, therefore, should be to enhance the institutional and policy environment to facilitate the investment program and to optimize the social, economic and environmental benefits from the investment program. This strategy should occur within the context of a longer-term vision of progressive development of integrated water resources management with the primary goal being the sustainably improving sector performance nationally.

32. **Challenges.** The main policy challenges for the investment program are associated with the management of water within the expanded MDP service area and relatedly how best to utilize this water to achieve the planned productivity increases and securities of drinking water supplies. With the planned investments under the investment program and the balance of the NCPCP, the MDP will be expanded with additional reservoirs, canals, and pumping stations to better supply new and existing users (hydropower, irrigation and drinking water). This expansion will bring with it a need to update and expand the WMP functions and management of the MDP. Allocation rules will need to be established for the new irrigation systems and community water supplies, as well as the new hydropower stations. The WMP representation will need to properly consider these additional systems and communities. The existing water management model will need to be upgraded or replaced.

33. The challenges for enhancing agricultural water utilization are related to improving system performance and increasing farm productivity. The main challenge of the recipient irrigation communities and agencies is to improve current levels of system performance from at all levels from conveyance, storage (tank) to farmers' fields. This will involve improvements in the adequacy and equity of water deliveries within the irrigation systems (from tank to distributary canals) which are the responsibility of government agencies (DOI, MASL and

provincial councils) and will require changes to current O&M practices and increased levels of public sector funding. For the tertiary system (from distributary canals to field canals), the challenge is to improve the performance of Farmer Organizations, in terms of system operation as well as maintenance of irrigation infrastructure, and as such, will require a greater contribution of farmer private sector support.

34. The challenge at the farm level is to achieve increases in production of paddy and diversification to higher value cash crops. With the provision of a more reliable water supply, there is an opportunity to increase cropping intensities with more Yala season cropping, as well as the opportunity to cultivate other higher-value field crops and vegetables. However, many farmers, particularly those in water scarce areas, are naturally risk averse and may be reluctant to grow non-paddy crops. The challenge is to promote changes in farming practices to fully utilize the new and more reliable water supplies.

35. **Principles.** The key principles on which reforms should be based include:

(i) priorities of water allocation under drought conditions, with drinking water supplies ranked highest;
(ii) maintenance of minimum flow regimes in the Mahaweli River, to protect environmental stewardship;
(iii) stakeholder representation in the MDP forecasting and operational planning processes, with the WMP representation extended to the new systems and communities; and
(iv) stakeholder participation and increase in the government's annual funding for managing, operating, maintaining and developing the entire water management, cascade and distribution systems.

36. **Reform Goals.** As past experience in Sri Lanka shows, sector reform can be fraught with challenges. However, this past experience also provides valuable lessons, including (i) avoiding being overly ambitious and unrealistic in terms of the scope and time-scale of reform efforts; (ii) uncoupling longer-term policy reform efforts from infrastructure investments; (iii) needing pragmatic consensus-driven approaches; and (iv) needing strong political leadership in implementation of reforms.[20] The investment program provides an opportunity to apply these lessons by taking a more pragmatic and focused approach, centered on the MDP and cascade irrigation systems. The investment program plans to expand on the current Mahaweli River management model, and complement the current World Bank initiatives in the sector that are applying the principals of integrated river basin management in preparing the National Water Use Plan and the Mundeni Aru River Basin Development Plan. As such, it is the iterative and gradual reform process similar to the 'spiral adaptive'[21] process promoted by international and regional water management organizations, such as the Network of Asian River Basin Organizations. The investment program, through demonstration and application of integrated water resources management principles in the MDP, will contribute to the longer-term goal of a more integrated approach to the management of water resources in the sector.

37. The short-term goals are the development and expansion of the MDP water management model for planning and management, incorporating the principles, priorities, and reforms above, along with the implementation of an effective program for management of cascade irrigation systems. The ultimate objective is the integration of O&M of the MDP with other irrigation systems.

[20] ADB. 2008. *Validation Report for Sri Lanka: Water Resources Management Project.* Manila
[21] UNESCO, IWRM Guidelines at River Basin Level. Part 1

D. Investment Program

38. The government's "Public Investment Strategy"[22] sets out the irrigation and water resources sector investment program for 2014-2016, amounting to $2.8 billion. Proposed major development projects are listed by sector and funding source. Table 1 lists a summary of the projects related to the water and agriculture sector, of which there are 139 with a combined cost of SLRs 874 billion ($6.7 billion). About half of the projects are related to drinking water supplies, and 40% to on-going and new irrigation projects.

Table 1: Water and Agricultural Sector Projects in the Public Investment Strategy

Sector	Projects	Costs	
– Sub-sector	**(no.)**	**(SLRs. B)**	**($ M)**
Agriculture	17	41	317
Irrigation	36	361	2,779
Water Supply	85	471	3,625
Power and Energy	1	0.6	5
Total	139	874	6,726

Source: Ministry of Finance and Planning, 2010.

39. **Agriculture**. There are a total of 17 agricultural investment projects with a total cost of SLRs 41.33 billion ($318 million). The largest, by far, is the fertilizer subsidy program at SLRs 38 billion, accounting for 92% of the total cost. The agricultural investment projects also include on-going projects for increasing production of field crops, big onion production, promotion of rice exports through establishing rice export zones, and a seed production and purchasing program.

40. **Irrigation.** There are a total of 36 irrigation projects at a total cost of SLRs 361 billion ($2.8 billion). The cost of new projects is SLRs 128 billion ($985 million), or 35% of the total cost. The on-going projects include construction of the Moragahakanda and Kaluganga Dams (including the Upper Elahera Canal headworks), construction of the Uma Oya Project for diversion of 145 MCM from the Uma Oya to the Kiridi Oya Basin, rehabilitation of the Mahaweli System B, construction of fifteen reservoirs, and rehabilitation of irrigation systems. The new projects include construction of the Mahaweli System 'B' Right Bank (SLRs 38,500 million in 2014-2018), implementation of the World Bank-sponsored Dam Safety Program (SLRs 44,822 million in 2015-2018), floods and Drought Mitigation/Climate Resilience Program for the protection of 135,000 hectare (ha) (SLRs 11,300 million in 2015-2018), Minipe Anicut raising project (SLRs 2,000 million in 2015-2018), and study of the development of minor tank systems (30,000 ha) under command of the North Central Province (SLRs 270 million in 2015-2016).

41. Implementation of the NCPCP is a high priority of the national strategy. It is an extension of the MDP with the transfer of water from the Mahaweli River to the northern and northwestern dry-zone for supply of drinking water and irrigation. Under the NCPCP, the target area is approximately 80,000 ha with about 255,000 beneficiary households, and in addition, 160 MCM will be supplied for drinking water. The total cost is estimated at SLRs. 187 billion ($1.5 billion).

[22] Government of Sri Lanka. Ministry of Finance and Planning. 2013. *Public Investment Strategy, 2014-2016*. Colombo.

42. **Water Supply.** There are 85 water supply projects, 19 on-going and 66 new, with a total cost of SLRs 471 billion ($3.6 billion). The number of projects and total investment reflects the national priority for improving access to safe drinking water.

43. **Power.** To meet rising demand for electricity, it is planned to increase installed capacity by 3,300 megawatt (MW) by 2020, for which 231 MW will be from hydropower (Uma Oya, Broadlands and Gingana Projects), and the majority of the balance from thermal (2,200 MW).

E. Financing Plan

44. The cost of the investment program is estimated at $675 million (Table 2). The government has requested an MFF in an amount up to $453 million equivalent from ADB's ordinary capital resources (OCR) and Special Funds resources to help finance a part of the investment program. The MFF will consist of several tranches, subject to the government's submission of related periodic financing requests, execution of the related loan and project agreements for each tranche, and fulfillment of terms and conditions and undertakings set forth in the framework financing agreement.[23] Approval for the second tranche is on stand-by in 2016 and for the third tranche is scheduled in 2018.

45. The MFF combines OCR and Asian Development Fund (ADF) financing up to the aggregate MFF amount. The provision of any ADF resources will be balanced by a corresponding reduction in available OCR financing (and vice versa), with total financing provided under the MFF not to exceed the aggregate MFF total of $453 million equivalent. Any ADF allocation with be subject to (i) the availability of ADF resources; (ii) Sri Lanka's access to such resources pursuant to ADB's Graduation Policy,[24] and the requirements of ADF donors; and (iii) the availability of such resources to Sri Lanka given ADB's policy on performance-based allocation of ADF resources.[25]

46. The first tranche will be financed, in part, from a loan from ADB's OCR ($76 million) and a loan from ADB's Special Funds resources ($74 million).[26] The OCR loan will have a 26-year term, including a grace period of 5 years, an annual interest rate determined in accordance with ADB's LIBOR-based lending facility,[27] a commitment charge of 0.15% per year, and such other terms and conditions set forth in the draft loan agreement. The loan from ADB's Special Funds resources will have a 25-year term, including a grace period of 5 years, an interest rate of 2.0% per year, and such other terms and conditions set forth in the draft loan agreement. The financing plan for the investment program and Tranche 1 is in Table 3.

47. Three tranches are envisaged under the MFF. The projected tranche schedule is: (i) Tranche 1 (2015-2019), estimated at $190 million; (ii) Tranche 2 (2016-2024), estimated at $285 million; and (iii) Tranche 3 (2018-2024), estimated at $200 million. The first tranche of the MFF will implement the following: (i) stage 1 of the Upper Elahera Canal Project (UECP); (ii) stage 1 of North Western Province Canal Project (NWPCP); (iii) Minipe Left Bank Canal

[23] Framework Financing Agreement (accessible from the list of linked documents in Appendix 2).
[24] ADB. 2008. *Review of the 1998 Graduation Policy of the Asian Development Bank.* Manila.
[25] ADB. 2004. *Review of the Asian Development Bank's Policy on the Performance-Based Allocation of Asian Development Fund Resources.* Manila; and ADB. 2008. *Refining the Performance-Based Allocation of Asian Development Fund Resources.* Manila.
[26] Periodic Financing Request for Tranche 1 (accessible from the list of linked documents in Appendix 2).
[27] The interest includes a maturity premium of 10 basis points. This is based on the above loan terms and the government's choice of repayment option and dates.

Rehabilitation Project (MLBCRP); (iv) stage 1 of program management, design and supervision consultants (PMDSC); and (v) Improving System Efficiencies and Water Productivity.

Table 2: Investment Program

Item	Amount[a] ($ million) Investment Program	Tranche 1	Tranche 2	Tranche 3
A. Base Cost[b]				
1. New and improved water conveyance and storage infrastructure constructed	465	116	228	121
2. Systems for improving water resources management and productivity developed	4	2	-	2
3. Multi-disciplinary investment program management operational	46	31	-	15
Subtotal (A)	**515**	**149**	**228**	**138**
B. Contingencies[c]	**134**	**32**	**48**	**54**
C. Financing Charges during Implementation[d]	**26**	**9**	**9**	**8**
Total (A+B+C)[e]	**675**	**190**	**285**	**200**

[a] Includes taxes and duties to be financed from government resources ($15 million for the first tranche and $54 million for the investment program) as cash contributions. Amounts for the second and third tranches are indicative.
[b] In mid-2014 prices.
[c] Physical contingencies computed at 10% for civil works and equipment. Price contingencies computed at 0.3%-1.4% on foreign exchange costs and 6.0% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.
[d] Includes interest and commitment charges. Interest during construction for the OCR loan has been computed at the 5-year forward LIBOR plus a spread of 0.50%, plus maturity premium of 0.10%. Commitment charges for the OCR loan are 0.15% per year to be charged on the undisbursed loan amount. Interest during implementation for the Special Funds resources loan has been computed at an interest rate of 2% per year.
[e] Any incidental expenditure relating to bank charges, local transport, freight and insurance are eligible for ADB financing.
Source: Asian Development Bank estimates.

Table 3: Financing Plan

Source	Investment Program Amount ($ million)	Investment Program Share (%)	Tranche 1 Amount ($ million)	Tranche 1 Share (%)
Asian Development Bank				
Ordinary capital resources (loan)	262	39	76	40
Special Funds resources (loan)	191	28	74	39
Cofinanciers[a]	114	17	-	-
Government of Sri Lanka	108	16	40	21
Total	**675**	**100**	**190**	**100**

[a] To be confirmed. Initial discussions are taking place with potential cofinancier(s).
Source: Asian Development Bank estimates.

SCHEDULE 2

DESIGN AND MONITORING FRAMEWORK FOR THE INVESTMENT PROGRAM

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Improved agricultural production and economic growth in the North Central Province, Central Province, North Western Province and Eastern Province.	By 2030: Annual growth of at least 8% in provincial GDP (baseline: 9.7% weighted average in 2010-2012) Agricultural production increases from SLRs 390 billion in 2012 to SLRs 600 billion (in 2012 prices)	Central Bank of Sri Lanka Annual Report Department of Agriculture and MASL annual reports	**Assumptions** Government completes the NCPCP and associated command area improvement, and implements programs to improve productivity of water Government continues to maintain irrigation infrastructure in the investment program's beneficiary command areas
Outcome Secured access to water resources for agricultural and drinking purposes in project areas	By 2024: 974 MCM/year of water available from the Mahaweli System in North Central Province, inclusive of 70 MCM/year of raw water for 358,000 people (baseline = 60 mcm/year with 0 mcm/year for drinking in 2014) 130 mcm/year water available from Mahaweli System in North Western Province (baseline= 0 mcm) Storage capacity of Minipe Anicut is increased to 1.25 mcm (baseline= 0.18 mcm in 2014) Irrigated area serviced by Mahaweli System increases to 162,000 ha with cropping intensity of 191% (baseline = 146,000 ha and 188% in 2014)	For all indicators: MASL and DOI annual reports	**Risk** Climate change impacts on water availability and water demand by crops exceed projections
Outputs 1. New and improved water conveyance and storage infrastructure	By 2024: Kalu Ganga - Moragahakanda Transfer Canal (9 km) and Upper Elahera Canal	For all indicators: MASL and DOI progress reports	**Assumption** Cofinancing will be secured on time. **Risk**

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
constructed	commissioned (82 km) By 2024: North Western Province Canal (96 km), two new reservoirs, and associated infrastructure commissioned By 2019: Minipe Anicut heightened by 3.5 m, and Left Bank Canal and associated infrastructure rehabilitated (74 km)		Unexpected ground conditions cause implementation delays
2. Systems for improving water resources management and productivity developed	Recommendations from ISEWP plan implemented during 2019 to 2024 Recommendations from SIWRM plan approved by the government by 2024	MASL and DOI project and investment program progress and completion reports MMDE Annual Reports	
3. Multi-disciplinary investment program management operational	Timely submission of periodic financing requests for subsequent tranches for subsequent tranches Program outputs delivered on time and within budget	For all indicators: MMDE financial records and progress reports	

Activities with Milestones	Inputs
1. New and improved water conveyance and storage infrastructure constructed 1.1 For Tranche 1, finalize detailed designs, and procurement documents, and award first contract of tranche 1 works package in Q4 2015 and last works package by Q1 2017 1.2 Commence works for tranche 1 in Q4 2015 1.3 Tender and award of tranche 2 works package in Q4 2016 1.4 Complete construction of tranche 1 works by Q4 2019 1.5 Tender and award the first works packages for tranche 3 by Q4 2017 and last works package by Q4 2021. 1.6 Complete construction of tranche 2 works by Q4 2021 1.7 Complete construction of tranche 3 works by Q4 2024 **2. Systems for improving water resources management and productivity developed** 2.1 Award ISEWP consulting package and mobilize consultants by Q3 2016 2.2 Complete ISEWP consulting package by Q2 2018 2.3 Award SIWRM consulting package and mobilize consultants by Q4 2020 2.4 Complete SIWRM consulting package by Q4 2022	**Asian Development Bank: $453 million** **Government: $108 million** **Cofinancing: $114 million to be confirmed**

Activities with Milestones	Inputs
3. Multi-disciplinary investment program management operational	
3.1 Mobilize PMDSC by Q3 2015	
3.2 Prepare the detailed designs, cost estimates, and contract documents for tranche 2 and 3 packages by December 2016	
3.3 Finalize the feasibility study for NCPCP Phase 2 and prepare necessary documents for possible funding by Q2 2017	
3.4 Finalize documents for consulting services package for SIWRM by Q4 2019	
3.5 Prepare necessary reporting documents to the government and ADB (continuous)	

ADB = Asian Development Bank; DOI = Department of Irrigation; GDP = gross domestic product; ha = hectare; ISEWP = improving system efficiencies and water productivity; km = kilometer; m = meter; MASL = Mahaweli Authority of Sri Lanka; mcm = million cubic meters; MMDE = Ministry of Mahaweli Development and Environment; NCPCP = North Central Province Canal Program; PMDSC = program management, design, and supervision consultants; Q = quarter; SIWRM = strengthening integrated water resources management.
Source: Asian Development Bank.

SCHEDULE 3

IMPLEMENTATION FRAMEWORK

Project implementation organizations	Management Roles and Responsibilities
Central Bank of Sri Lanka	– Setup and management investment program imprest account.
Program Steering Committee (PSC)	– Chaired by Secretary, Ministry of Mahaweli Development and Environment (MMDE), and with members as shown in Attachment 1 (subject to changes from time to time). The PSC will be responsible for: o Overseeing and monitoring implementation of the investment program, as well as overall program funding o Convening at least quarterly meetings to support implementation of the investment program. The meetings will discuss overall status and implementation issues, and when and as necessary, invite other participants from government and non-government organizations to support coordination and implementation of the investment program o Facilitating inter-ministerial coordination o Ensuring coordination among government agencies o Monitoring implementation progress of the investment program including its safeguard and development objectives o Rectifying issues that may be hindering implementation progress of the investment program o Providing guidance to the executing agency
Ministry of Mahaweli Development and Environment (MMDE)	– MMDE is the executing agency for the investment program. To implement the investment program, MMDE will establish a Program Management Unit (PMU) under which there will be three Project Implementation Units (PIUs) as described below. MMDE's implementing department is the Mahaweli Authority of Sri Lanka (MASL) and it will second staff to the PMU and UECP PIU. After completion and commissioning of the UECP, MASL will take over its management, operation and maintenance.
Executing Agency (EA)	– As the EA, MMDE will be responsible for: o Execution of the entire investment program o Providing overall coordination of all project activities o Leading inter-agency coordination o Providing policy guidance, strategic direction, and oversight o Ensuring adequacy of overall investment program financing o Establishing the PMU and PIUs and ensuring staffing positions are continuously filled with appropriately qualified and experienced officers and support staff o Securing annual budgetary allocations proposed by the

Project implementation organizations	Management Roles and Responsibilities
	PMU o Ensuring cabinet approval of contract packages o Preparing and submitting to ADB: (i) periodic financing requests for all tranches: (ii) quarterly progress reports; (iii) quarterly disbursement projections; and (iv) updated implementation plans, etc. o Monitoring and ensuring compliance of loan covenants and environmental and social safeguards, and facilitate the implementation of corrective actions o Establishing and chairing the PSC. o Manage investment program's imprest sub-accounts.
Department of Irrigation (DOI)	– DOI, under the Ministry of Irrigation, will second staff to the PMU and PIUs for MLBCRP and NWPCP. – After completion and commissioning of the MLBCRP and NWPCP, DOI will take their management, operation and maintenance.
Mahaweli Authority of Sri Lanka (MASL)	– MASL, under MMDE, will second staff to the PMU and PIU for UECP. – After completion and commissioning of the UECP, MASL will take its management, operation and maintenance.
Program Management Unit (PMU)	– The PMU will be accommodated within MMDE offices in Colombo. – The PMU will be led by either a Special Grade Engineer or Senior Engineer of Class 1 from MMDE who will be responsible for overall implementation management of the investment program. – The PMU will be responsible for: o Preparation of implementation plans and annual budgets o Overseeing the overall implementation of the program and each of its tranches o Liaising and corresponding with ADB on all issues relating to the investment program and each project o Coordinating with other government agencies to resolve any interdepartmental issues, and other aid agencies for implementation of non-physical activities as necessary o Approving all planning, design and contract documents associated with the investment program o Overall management of the Program Management, Design and Supervision Consultant (PMDSC) o Recruiting and managing the ISEWP and SIWRM consultant services packages o Acting as the "Employer" for all civil works packages o Overseeing and managing the procurement of services, works and goods by the respective PIUs o Monitoring the activities of the project implementation units (PIUs) and advising as necessary

Project implementation organizations	Management Roles and Responsibilities
	○ Maintaining investment program accounts and comprehensive loan financial records, and submitting consolidated quarterly reports ○ Establishing and maintaining a project performance monitoring and evaluation system (PPMES) at each subproject level, as well as a project and investment program levels ○ Monitoring physical and non-physical investment activities under each project; obtaining necessary data for establishing baselines, maintaining and updating the PPMES ○ preparing and submitting: (i) reports to the PSC and MMDE for consideration and approval; (ii) periodic progress reports on each investment activities; (iii) periodic financing requests (through the Ministry of Finance and Planning) for ADB's consideration; (iv) audit reports; and (v) reports mandated under the loan and project agreements ○ Preparing and submitting withdrawal applications to ADB ○ Reviewing, approving and transferring of PIUs' request for payments ○ Preparing media information and implementing the investment program's communications plan ○ Updating and monitoring of the satisfactory implementation of resettlement plans, environment management plans (EMPs), and any correction action plans including resettlement plan for additional facilities such as access roads and camps, consistent with safeguards requirements and ADB's Safeguards Policy Statement (2009), and submitting updated safeguards and monitoring reports for review and disclosure.
MLBRC, UEC and NWPC Project Implementation Units (PIUs)	– Under the PMU, MMDE will establish separate PIUs for the MLBRC, UEC and NWPC investment projects with staff seconded from MMDE, DOI, MASL, and new recruits. The MLBRC and NWPC PIUs will be led by Class 2 officers from DOI, while the UEC PIU will be led by a Class 2 officer from MASL. – The PIUs will be accommodated within DOI and MASL offices within the project areas. – The PIUs will be responsible for: ○ Preparing, reviewing and approving services, works and goods packages ○ Leading implementation of the investment projects by: (i) procuring and evaluating services, works and goods under each investment project; (ii) obtaining all necessary government approval and right-of-way clearances from other state departments and private land owners as necessary; (iii) implementing the Environment Management Plans and Resettlement Plans in compliance with ADB's policies; (iv) monitoring the implementation of social dimensions of the project

Project implementation organizations	Management Roles and Responsibilities
	including adherence to the labor law and core labor standards; and (v) managing contracts awarded under the investment projects o publishing and formally disclosing the project cutoff date to the affected people and communities upon finalization of Detail Measurement Survey (DMS) for updating the required Resettlement Plans o Preparing and submitting to the PMU monthly safeguards progress reports, with complaint-grievances status included, and implementation of labor law and core labor standard for the preparation of biannual safeguards monitoring reports o acting as focal point, with support from the PMU, for the implementation of Grievance and Redress Mechanism and complaint resolutions o Managing the PMDSC at the investment project level o Preparing work and procurement plans, budgets, monitoring plans, and accounts o Submission of request for payments to PMU for prior approval o Undertaking day-to-day project and safeguards management o Coordination with the field staff of concerned line departments o Coordination with Project Management Committees, Farmer Organizations, and respective Project Managers of the beneficiary irrigation systems. o Implementing safeguards actions following the relevant plans o Preparing program progress reports and safeguards monitoring reports o Maintaining project accounts and financial records
Project Advisory Committee (PAC)	– The PAC will comprise of senior technical staff from MMDE, MASL, DOI, and other government agencies as required. It will: o Provide advice on Phase 2 investments o provide strategic feedback to the PSC about the quality of construction, safeguards planning and implementation, and any design or construction issues requiring special attention o assist the PMU and PIUs in identifying future issues and providing impartial and technically competent opinions o meet as and when required but at least quarterly
Program Management, Design and Supervision Consultant (PMDSC)	– Finalizing the detailed engineering designs, cost estimates and bid documents for all work, goods and services packages under the investment program – Preparing due diligence reports (technical, economic,

Project implementation organizations	Management Roles and Responsibilities
	financial, safeguards) and draft ADB board documents for possible financing of Phase 2 – Providing overall investment program management and administration support on reporting, financial management, and monitoring and evaluation – Supporting the PMU and PIUs with establishing and maintaining the PPMES – Undertaking any necessary additional surveys and investigations to support designs and implementation – Serving as the "Engineer" and representing MMDE in the construction contracts – Supporting commissioning and operation of the investments, including preparing management, operation and maintenance manuals – Preparing a Strategic Environment Assessment (SEA)
Independent Review Panel	– The independent review panel will comprise selected experts engaged on an individual basis who will review outputs from the PMDSC and other consultants, and provide advice to the PMU and ADB on technical and contractual matters. Experts may include tunnel, dam and contract specialists, and others if determined necessary.
ADB	– Monitoring and reviewing overall implementation of the investment program in consultation with the EA including: the project implementation schedule; actions required in terms of environmental impacts and RPs as applicable; timeliness of budgetary allocations and counterpart funding; project expenditures; progress with procurement and disbursement; statement of expenditure when applicable; compliance with particular loan covenants; and the likelihood of attaining the investment program's immediate development objectives. – Undertaking periodic review and supervision of the implementation of the investment program through regular loan review missions, midterm and final review missions. – Recruiting the PMDSC under Tranche 1.

Attachment 1: Members of Program Steering Committee

The Program Steering Committee will comprise the following positions, subject to appropriate changes during the implementation period:

Position, Organization

1. Secretary, Ministry of Mahaweli Development and Environment
2. Secretary, Ministry of Irrigation
3. Secretary, Ministry of Lands
4. Secretary, Ministry of Power and Energy
5. Secretary, Ministry of Tourism and Sports
6. Chief Secretary, North Central Province
7. Chief Secretary, North Western Province
8. Chief Secretary, Central Province
9. Director General, Department of Irrigation
10. Director General, Mahaweli Authority of Sri Lanka
11. Director General, Department of Agriculture
12. Director General - External Resources, External Resources Department
13. Director General, Department of National Budget
14. Director General, Department of Project Management and Monitoring
15. Director General, Central Environment Authority
16. Director General, Archeological Department
17. Director General, Agrarian Services Department
18. Surveyor General, Department of Survey
19. Director General – Wildlife, Department of Wildlife Conservation
20. Conservator of Forest, Department of Forest
21. Land Commissioner General, Land Commissioner General's Department
22. Chief Valuer, Department of Valuation
23. District Secretary / Government Agent – Anuradhapura
24. District Secretary / Government Agent – Polonnaruwa
25. District Secretary / Government Agent – Kurunegala
26. District Secretary / Government Agent – Matale
27. District Secretary / Government Agent – Kandy
28. Director of Irrigation, Anuradhapura
29. Director of Irrigation, Polonnaruwa
30. Director of Irrigation, Kurunegala
31. Director of Irrigation, Kandy
32. Program Director, Mahaweli Water Security Investment Program
33. Project Director (UEC PIU), Mahaweli Water Security Investment Program
34. Project Director (NWPC PIU), Mahaweli Water Security Investment Program
35. Project Director (MLBCR PIU), Mahaweli Water Security Investment Program
36. Team Leader (PDMSC), Mahaweli Water Security Investment Program

SCHEDULE 4

SELECTION CRITERIA AND APPROVAL PROCESS FOR PROJECTS

1. The Investment Program finances Phase 1 of the government's planned two-phased North Central Province Canal Program (NCPCP). The investment program comprises three projects: (i) Upper Elahera Canal (UEC) Project; (ii) North Western Province Canal (NWPC) Project; and (iii) Minipe Left Bank Canal Rehabilitation (MLBCR) Project. It also includes three consulting services packages: (i) Program Management, Design and Supervision Consultant (PMDSC); (ii) Improving System Efficiencies and Water Productivity (ISEWP); and (iii) Strengthening Integrated Water Resources Management (SIWRM).

A. Selection Criteria

2. The projects under the Investment Program were selected on the following criteria:

(i) They are components of NCPCP which is a key priority of Sri Lanka's Public Investment Strategy 2014-2016, Ministry of Finance, Sri Lanka. The NCPCP will complete outstanding water conveyance investments under the Mahaweli Development Program. Implementation of MDP began in 1970 and its completion is a key priority of the government. The investment program will support the objectives of MDP to maximize the productivity of Mahaweli River Basin (MRB) water resources by transferring available water to Sri Lanka's northern dry zone areas for irrigation, drinking and commercial purposes. MDP and NCPCP also include hydropower plants; completion of the NCPCP will allow Sri Lanka to optimize water resources for power generation, and supply for irrigation and drinking water users.

(ii) At their completion, the three projects form a complete hydraulic unit with the existing Mahaweli System: (i) MLBCRP will allow diversion of additional upstream water to the UECP and NWPCP; (ii) UECP will provide new conveyance infrastructure from the existing Mahaweli System to the existing Huruluwewa Reservoir, which is currently supplied by the existing Huruluwewa Feeder Canal (HFC), and the existing Manankattiya, Eruwewa and Mahakandarawa Reservoirs; (iii) on completion of the UECP, freed-up water within the HFC will be diverted to the NWPCP; and (iv) the Huruluwewa Reservoir, Mannikattiya Reservoir, and NWPCP will supply water to existing major and minor cascade irrigation systems.

(iii) The infrastructure for the UECP is designed with extra capacity to transfer additional water for NCPCP Phase 2 investments.

(iv) The three consulting services packages will improve water management within the Mahaweli system through introducing water management technology and capacity building.

(v) The projects are technically feasible and supported with detailed feasibility and design reports.

(vi) The projects are economically feasible and financially sustainable, and the investment program's estimated economic internal rate of return is higher than

12%, based on the economic analysis undertaken in accordance with ADB's Guidelines for the Economic Analysis of Project.

(vii) The designs of the projects have been finalized based on inputs from communities under consultation conducted in accordance with the Resettlement Framework and from key government agencies including Department of Wildlife Conservation and Forests Department.

(viii) The projects are environmentally and socially sound, and include measures to mitigate any possible environment and social impacts in accordance with the safeguard frameworks prepared in the investment program's Environment Assessment and Review Framework and Resettlement Framework, and ADB's Safeguard Policy Statement (SPS) 2009. For each project, a poverty and social analysis will be conducted in accordance with ADB's guidelines on poverty and social assessment.

B. Approval Procedures

3. All projects will be processed in accordance with the procedure set out below.

(i) Central Environment Authority's approval of the Environmental Impact Assessments for the UEC and NWPC Projects, and the Initial Environmental Examination for MLBCR Project.

(ii) Upon clearance of the safeguard planning documents by ADB, MMDE will proceed with tendering as guided by ADB Procurement Guidelines.

(iii) If any time during the implementation the design of a project is modified to affect social or environmental impacts, all related safeguard planning documents for such project will be modified accordingly and undergo clearance by ADB.

SCHEDULE 5

SOCIAL DIMENSIONS AND SAFEGUARD REQUIREMENTS

1. Sri Lanka will ensure that all the requirements prescribed in this Schedule, and the following social and safeguard frameworks and plans that have been prepared with respect to the Facility and the first tranche and of which ADB has been provided full copies, and which are deemed incorporated herein by reference, are complied with during the processing and implementation of the projects under the Facility.

(i) Environmental Impact Assessment: Upper Elahera Canal Project
(ii) Environmental Impact Assessment: North Western Province Canal Project
(iii) Initial Environmental Examination: Minipe Left Bank Canal Project
(iv) Environmental Assessment and Review Framework
(v) Resettlement Plan: North Western Province Canal Project
(vi) Resettlement Framework

2. The frameworks cover the Facility-specific information and requirements in accordance with ADB's safeguard policies: (i) the general anticipated impacts of the components or projects likely to be financed under the MFF on the environment, involuntary resettlement, and indigenous peoples; (ii) the safeguard criteria that are to be used in selecting components, projects; (iii) the requirements and procedure that will be followed for screening and categorization, impact assessments, development of management plans, public consultation and information disclosure (including the 120-day disclosure rule, if required), and monitoring and reporting; and (iv) the institutional arrangements (including budget and capacity requirements) and the client's and ADB's responsibilities and authorities for the preparation, review and clearance of safeguard documents.

3. Prior to the preparation of each PFR, the applicability and relevance of the safeguard frameworks for environmental assessment and involuntary resettlement will be reviewed by Sri Lanka and Ministry of Mahaweli Development and Environment, and updated to ensure relevance and consistency with applicable country legal frameworks and ADB's safeguard policies, as amended from time to time.

4. In all cases, for each new PFR preparation, the client will review ongoing projects to check on the status of compliance with the social and safeguard plans and frameworks, and submit the review reports to ADB, together with other required safeguard documents relevant to the projects included in the tranche being processes. In any case if major noncompliance is discovered in the course of the review of ongoing projects, a corrective action plan will be prepared within one month of discovery and submitted to ADB, and implemented within three months, or as agreed with ADB.

SCHEDULE 6

UNDERTAKINGS

1. Sri Lanka shall remain, and shall cause the Ministry of Mahaweli Development and Environment (MMDE) or any successor thereto acceptable to ADB, to remain, committed to implementation of the Mahaweli Water Security Investment Program ("Investment Program") and achieve its outcome and outputs in a timely manner.

2. Sri Lanka shall remain, and shall cause MMDE to remain, committed to implementation of the North Central Province Canal Program during the implementation of, and following the completion of, the Investment Program.

3. In the event of any change in the road map, policy framework, investment plan, or financing plan for the Investment Program, Sri Lanka shall assess, and shall cause MMDE to assess, with ADB any potential impact on the Investment Program and evaluate any change in scope, amendment, or continuation, as appropriate, of the Investment Program.

4. Sri Lanka shall take all actions, including provision of funds (including any residual funds for completion of project contracts), facilities, services and other resources necessary or appropriate, to enable MMDE to perform its obligations under the legal agreements for each tranche, and for timely completion of the projects under the Investment Program.

5. Sri Lanka shall implement, and shall cause MMDE to implement, the Investment Program and the projects under the Investment Program in accordance with the detailed arrangements set forth in the Facility Administration Manual (FAM). Any subsequent change to the FAM shall become effective only after approval of such change by Sri Lanka, MMDE and ADB. In the event of any discrepancy between the FAM and the legal agreements pursuant to which ADB finances a tranche, the provisions of the legal agreements shall prevail.

6. Sri Lanka shall cause MMDE to employ sufficient staff for the Program Management Unit (PMU) and Project Implementation Units (PIUs) for the duration of the Investment Program, with adequate and relevant expertise in the field of project management, financial management, engineering, procurement, and environmental and social safeguards implementation. Sri Lanka shall ensure, and shall cause MMDE to ensure, that all staff employed for the Investment Program and projects under the Investment Program are equipped with adequate office space, facilities, equipment, support staff, and telecommunications and management information systems for the entire duration of the Investment Program.

7. The PMU Program Director and PIU Project Directors shall hold the position not less than the rank of Class 1 engineer, or equivalent, Officers, unless otherwise acceptable to ADB. PIU Project Directors and staff shall be seconded from the Department of Irrigation (DOI), Mahaweli Authority of Sri Lank (MASL), and other relevant agencies.

8. Sri Lanka and MMDE shall (a) ensure that the majority of counterpart staff assigned to the PMU and PIUs are assigned to the Investment Program on a full-time basis; and (b) undertake best efforts to ensure that they remain in their position for a reasonable period of time, and that staff replacements do not unduly disrupt implementation of the Investment Program. Sri Lanka and MMDE shall provide ADB reasonable opportunity to comment on

any proposed appointment of persons to key positions in the PMU and PIUs, including the Program Director for the PMU, and the Project Directors for the PIUs.

9. Sri Lanka shall make available to MMDE all counterpart funds required for timely and effective implementation of the Investment Program, including, without limitation, any funds required to keep the PMU and PIUs fully equipped and fully staffed in accordance with the requirements set out in the FAM, to mitigate unforeseen environmental and social impacts, and to meet additional costs arising from design changes, price escalation in construction costs and/or unforeseen circumstances. Sri Lanka shall make the resources thus required available to MMDE on a quarterly basis for each fiscal year.

10. Sri Lanka shall cause MMDE to, if and when ADB requests, recruit and engage a panel of individual experts with qualifications, experience and terms of reference acceptable to ADB, to review, analyze and advise on the detailed engineering designs, contract documents, and implementation of the dam and tunnel components of the Investment Program and its projects.

Interagency Coordination

11. Sri Lanka shall ensure that its ministries, agencies and departments involved in the implementation of the Investment Program, including the provincial and district agencies, give their full cooperation to ensure smooth implementation of the Investment Program.

Safeguards

12. Sri Lanka shall ensure, or cause MMDE to ensure, that the preparation, design, construction, implementation, operation and decommissioning of the projects and all project facilities under the Investment Program comply with (a) all applicable laws and regulations of Sri Lanka including relating to environment, health, and safety; (b) the environmental safeguards as set out in ADB's Safeguard Policy Statement ("SPS"); (c) the Investment Program's environmental assessment and review framework; and (d) all measures and requirements set forth in the relevant environment impact assessments, initial environmental examination, and environment management plans, and any corrective or preventative actions with respect to environment set forth in safeguards monitoring reports.

13. Sri Lanka shall ensure, or cause MMDE to ensure, that all land and all rights-of-way required for each project and project facilities are made available to the works contractors in accordance with the schedule agreed under the related works contract and that all land acquisition and resettlement activities are implemented in compliance with (a) all applicable laws and regulations of Sri Lanka relevant to land acquisition and involuntary resettlement; (b) the involuntary resettlement safeguards as set out in the SPS; (c) the Investment Program's resettlement framework; and (d) all measures and requirements set forth in the respective resettlement plans and safeguard planning documents, and any corrective or preventive actions with respect to land acquisition and involuntary resettlement set forth in any safeguards monitoring reports.

Social

14. Sri Lanka shall ensure, or cause MMDE to ensure, that civil works contracts under the projects follow all applicable labor laws of Sri Lanka (including not employing or using

children as labor, equal pay for equal work), health, safety, welfare, sanitation, and working conditions.

Operation and Maintenance

15. Sri Lanka shall ensure that: (a) MMDE, DOI, and MASL maintain the project infrastructure; (b) proper technical supervision and adequate routine operation and maintenance funds are provided; and (c) the funds required for the operation, maintenance and rehabilitation of the project infrastructure are allocated annually and released on a timely basis.

Governance and Anticorruption

16. Sri Lanka shall comply, and shall cause MMDE to comply, with ADB's Anticorruption Policy (1998, as amended to date) and cooperate with any investigation by ADB and extend all necessary assistance for the satisfactory completion of such investigation.

17. Sri Lanka shall ensure, or cause MMDE to ensure, that the anticorruption provisions acceptable to ADB are included in all bidding documents and contracts, including provisions specifying the right of ADB to audit and examine the records and accounts of the executing and all contractors, suppliers, consultants, and other service providers as they relate to any project under the Investment Program.

Policy Dialogue and Coordination with Development Partners

18. For purposes of project coordination, Sri Lanka shall, and shall cause MMDE to, keep ADB informed of discussions (a) among government and quasi-government bodies with responsibility for irrigation and water resources sector development; and (b) with any development partners, that have implications for the implementation of the Investment Program, and shall provide ADB with an opportunity to comment on any proposed interventions in the water sector resulting from such discussions. Sri Lanka and MMDE shall take ADB's views into consideration before finalizing and implementing any such proposals.

Improved Water Management and Farmer Extension Services

19. Sri Lanka shall, and shall cause MMDE to, during the course of implementation of the Investment Program, be committed to undertaking the following studies which seek to improve water management: (a) Improving System Efficiencies and Water Productivity; and (b) Strengthening Integrated Water Resources Management.

20. Sri Lanka shall, and shall cause MMDE and other relevant government agencies to, provide sufficient extension services to farmers located within the Investment Program's beneficiary areas to educate and encourage them to (a) improve their application of irrigation water to crops and reduce water consumption; (b) apply water saving practices such as Alternate Wetting and Drying and System for Rice Intensification; (c) improve crop yields; (d) grow higher valued "other field crops" during the Yala season; and (e) reduce application of fertilizers and pesticides.