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The World Bank

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INTERNATIONAL DEVELOPMENT ASSOCIATION

IMMEDIATE RESPONSE MECHANISM

RESPONSE PAPER

FOR THE JULY-SEPTEMBER 2015 FLOODS AND LANDSLIDES IN

THE REPUBLIC OF THE UNION OF MYANMAR

FOR THE AMOUNT OF

SDR 41,110,778 MILLION

(USD 57,755,298.69 EQUIVALENT)

JUNE 8, 2016

REVISED DECEMBER 2016 AND AUGUST 2018

*Social, Urban, Rural and Resilience Global Practice
EAST ASIA AND PACIFIC*

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CURRENCY EQUIVALENTS

Exchange Rate Effective (July 31, 2018)

Currency Unit = Myanmar Kyat (MMK)

MMK 1,427 = US\$1.00

US\$1.40487 = SDR1.00

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

CERC	Contingency Emergency Response Component
CERIP	Contingent Emergency Response Implementation Plan
DA	Designated Account
DC	Direct Contracting
DL	Disbursement Letter
DRM	Disaster Risk Management
ECOP	Environmental Codes of Practice
GoM	Government of Myanmar
IDA	International Development Association
IRM	Immediate Response Mechanism
IRM-CC	Immediate Response Mechanism – Coordination Committee
MLFRD	(former) Ministry of Livestock, Fisheries and Rural Development
MOAI	(former) Ministry of Agriculture and Irrigation
MOALI	Ministry of Agriculture, Livestock and Irrigation
MOC	Ministry of Construction
MOF	(former) Ministry of Finance
MOPF	Ministry of Planning and Finance
MOSWRR	Ministry of Social Welfare, Relief and Resettlement
MOTC	Ministry of Transport and Communications
NNDMC	National Natural Disaster Management Committee
OAG	Office of the Auditor General of the Union
SDR	Special Drawing Rights

THE REPUBLIC OF THE UNION OF MYANMAR

IDA IRM Response Paper

TABLE OF CONTENTS

I. SUMMARY.....	4
II. BACKGROUND AND CONTEXT.....	5
A. IDA IRM.....	5
B. EMERGENCY CONTEXT AND RECOVERY EFFORTS.....	6
III. IDA IRM ACTIVATION	9
A. ACTIVATION CONDITIONS AND ELIGIBILITY	9
B. USE OF IDA IRM FUNDS	11
C. IDA IRM IMPLEMENTATION ARRANGEMENTS	13
IV. SUMMARY OF PROPOSED ACTIONS.....	22
ANNEX 1: ENVIRONMENTAL CODE OF PRACTICE: FOR THE MANAGEMENT OF THE PROSPECTIVE DISPOSAL OF GOODS PURCHASED FROM COMPONENT 3 IDA IMMEDIATE RESPONSE MECHANISM	23

Note: In July 2018, the IDA IRM Response Paper was revised in line with OPCS guidance to, on exceptional basis, expand the use of IRM in order to enable the usage of goods and items beyond the specific eligible emergency at time of IDA IRM activation for the 2015 Floods and Landslides emergency, per request from the Government of Myanmar to provide support to medium term disaster risk management which includes disaster preparedness and response, mitigation, and recovery. The amendment to the IDA IRM Response Paper, the IDA IRM Contingency Emergency Action Plan (CERIP), and the IDA IRM Operations Manual ensures eligibility of expenditures with definition of future use of goods and equipment, while fulfilling relevant World Bank policies and procedures.

I. SUMMARY

1. **This proposal seeks management approval to reallocate credit proceeds from designated projects to support disaster recovery in Myanmar following the 2015 floods and landslides through the International Development Association (IDA) Immediate Response Mechanism (IRM).** The disaster significantly impacted Myanmar's people and economy, disproportionately affecting the poor and vulnerable. Based on urgent financing needs for the post-disaster recovery, on June 3, 2016, the Government of Myanmar (GoM) requested the activation of the IDA IRM in the amount of US\$32 million as part of a package of support provided by the World Bank, which the Bank approved on June 15, 2016 with a reallocation of SDR 22.8 million to the IRM components of 4 IRM source projects¹: Essential Health Services Access Project (P149960)², Ayeyarwady Integrated River Basin Management Project (P146482), Agricultural Development Support Project (P147629), and National Community Driven Development Project (P132500)). Additional SDR 10.7 million was also made available upon effectiveness of the Floods and Landslides Emergency Recovery Project, approved by the World Bank Board of Directors on July 14, 2016, following the conditions described in this IDA IRM Response Paper. Given large unmet needs, on November 25, 2016, the GoM requested additional amount of US\$13.76 to be included under the IRM through the National Electrification Project. In June 2017, the implementation period for the IRM was extended to September 30, 2018, per request from the GoM.

2. The details of the designated IRM projects and the amounts of the reallocations are presented in the Table 1 below (with information as of 31 July 2018). Per IDA IRM Guidance Note from June 2015, these projects – except for the Flood and Landslide Emergency Recovery Project – were restructured to enable reallocation to IDA IRM.

¹ In line with the IDA IRM Operations Manual, the IDA IRM funds would be reallocated to the IRM CERC component in the respective source project(s) from other component(s) of the same project(s) and channeled through an IDA IRM designated account.

² While the Essential Health Services Access Project was restructured for the purpose of the IRM; funds were not used from this project per request from MOPF dated May 8, 2017.

Table 1. List of Projects with CERC Components with proposed reallocations for IDA IRM

		ADSP	NCDD	AIRBMP		NEP	FLERP	
IRM FUNDING		IDA 56240	IDA 56870	IDA 55590	Sub-total	IDA 57270	IDA 58890	TOTAL
		(1)	(2)	(3)	(5=1+2+3+4)	(6)	(7)	(8=5+6+7)
CERC ALLOCATION (in SDR)		3,560,000.00	13,510,000.00	3,290,000.00	20,360,000.00	10,050,778.00	10,700,000.00	41,110,778.00
CERC ALLOCATION (in USDeq as at 31 July 2018*)		5,001,337.20	18,979,793.70	4,622,022.30	28,603,153.20	14,120,036.49	15,032,109.00	57,755,298.69
PROJECTS RESTRUCTURING/REALLOCATIONS		From Cat 1 to 2	From Cat 1 to 3	From Cat 1 to 2		From Cat 1 to 3	N/A	
PROJECTS RESTRUCTURING DATE		6/14/2016	6/27/2016	6/19/2016		8/23/2017	N/A	
AGGREGATE UNDISBURSED BALANCE OF IDA PROJECTS AS OF RESTRUCTURING DATE					\$1,243.08 Million			\$1,683.00 Million
%age of IRM FINANCING ACCESSED OVER AGGREGATE UNDISBURSED BALANCE OF IDA PROJECTS (SHOULD NOT EXCEED 5%)					2.5%			2.7%
DISBURSEMENTS/ADVANCES in USD								
1st	20-Jun-16	4,990,000.00	5,010,000.00					10,000,000.00
2nd	24-Mar-17		10,000,000.00					10,000,000.00
3rd	28-Jun-17		3,500,000.00	3,890,000.00				7,390,000.00
4th	1-Feb-18					12,056,620.00	15,000,000.00	27,056,620.00
TOTAL DISBURSEMENTS/ADVANCES		4,990,000.00	18,510,000.00	3,890,000.00		12,056,620.00	15,000,000.00	54,446,620.00
UNDISBURSED BALANCE (in USD*)		11,337.20	469,793.70	732,022.30		2,063,416.49	32,109.00	3,308,678.69
DOCUMENTED EXPENDITURE								
1st	1-Feb-18	-	-	2,069,233.32		-	-	2,069,233.32
		-	-	2,069,233.32		-	-	2,069,233.32
UNDOCUMENTED ADVANCES		4,990,000.00	18,510,000.00	1,820,766.68		12,056,620.00	15,000,000.00	52,377,386.68

Notes: ADSP = Agricultural Development Support Project, NCDD = National Community Driven Development Project; AIRBMP = Ayeyarwady Integrated River Basin Management Project; NEP = National Electrification Project; FLERP = Flood and Landslide Emergency Recovery Project. Per GoM additional request November 25, 2016, NEP and FLERP were included. Information in the table is as of 31 July 2018, using the exchange rate as of 31 July 2018.

II. BACKGROUND AND CONTEXT

A. IDA IRM

3. The IDA IRM was approved by the World Bank Board of Directors in 2011 (IDA/R2011-0303) to provide a flexible financing option for IDA recipient countries to rapidly access financing following a large-scale natural or man-made disaster. In case of an emergency, the IDA IRM allows countries to rapidly access up to 5 percent of the undisbursed IDA investment-lending portfolio of effective projects which include an IRM contingent emergency response component, or up to US\$5 million of its undisbursed balances, whichever is larger, to address immediate financing needs after an eligible crisis or emergency; which is defined as an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact, associated with a natural or man-made crisis or disaster. The IRM builds on the flexibility provided in the World Bank (WB) emergency lending procedures that allows rapid restructuring of the project portfolio to meet emergency financing needs, and the use of simplified procedures to execute emergency response operations.

B. Emergency Context and Recovery Efforts

4. **The floods were a rare event with the largest disaster impacts since Cyclone Nargis in 2008.** Depending on the location, the floods have an estimated return period of 20–50 years. They were accompanied by landslides, particularly in Chin State.³ Torrential rains started on July 16, 2015 saturating the ground. On 30 July, Cyclone Komen made landfall in Bangladesh bringing strong winds and additional torrential rains to Chin and Rakhine States, Sagaing, Magway and Bago regions.⁴ In Chin State, the monthly rainfall of July measured at the weather station in Hakha would be equal to a 1-in-1,000-year rainfall. The combination of heavy rainfall, high soil saturation, and unstable soils in hilly areas caused widespread and devastating landslides particularly in the Chin State. Up to 5.2 million people were exposed to heavy floods, strong winds and landslides in the 40 most heavily affected townships. Over 1.6 million people were temporarily displaced, 525,000 houses were impacted, and 132 lives were lost. On July 31, 2015, Myanmar’s President declared a state of emergency in Sagaing Region, Magway Region, Chin State, and Rakhine State, designating them as disaster-affected zones, in accordance with Article 11 of the Natural Disaster Management Law.

5. **A Post-Disaster Needs Assessment (PDNA) was conducted by the Government of Myanmar (GoM) between September 24 and October 12, 2015 to assess the impact on key sectors, understand the scale of the economic impact, and support the process of recovery and reconstruction.** The PDNA estimates that the total economic value of the effects of the floods and landslides was approximately US\$1.5 billion, equivalent to 3.1 percent of the GDP in 2014/2015.⁵ Of this, US\$615.6 million was attributed to damages and US\$892.9 million to losses. In terms of per capita effects, Chin State sustained the highest value of damages and losses, followed by Rakhine State and the Ayeyarwady Region. It is expected that at least 9.4 million workdays will be lost, along with US\$16.9 million in personal wage income, due to the disaster.⁶ The disaster is also likely to cause noticeable production losses for businesses trying to recover activities to pre-disaster levels. Poor landless households that are dependent on labor will not have access to agricultural jobs. Small farmers have few assets apart from their land and are therefore ill-equipped to deal with the economic shock.

6. **The agriculture, livestock and fisheries sector was the most severely affected, followed by housing and then commerce and industry amounting to 37, 28 and 25 percent of the total disaster effects, respectively.** In the agriculture sector, the disaster has damaged 20.4 percent of the cultivated area— 2,952,753 hectares—in the impacted regions. In aggregate, the estimated damages and losses in the agricultural sector comes to approximately 1.1 percent of national GDP and 4.2 percent of agricultural GDP. Most of the damages have affected farmers, livestock owners, and fishermen, and include impacts on plantations of perennial crops,

³ Government of Myanmar. 2015. PDNA. Based on analysis conducted by Deltares. 12 October 2015.

⁴ Government of Myanmar. 2015. Situation Report 1. National Natural Disaster Management Committee. 10 August.

⁵ Government of Myanmar. 2015. PDNA.

⁶ Government of Myanmar. 2015. PDNA.

warehouses and storage facilities containing farmers’ saved seeds, animals and livestock, private infrastructure and shelters, aquaculture facilities and fishery ponds, and fishing equipment, gear, and boats. Losses include decreases in production from totally destroyed crop-growing areas and areas with lower yields, decreases in production of meat, eggs, and honey, and smaller harvests from aquaculture facilities and inland fisheries ponds. Losses also include the cost of animal feed and of renting animals for draught power. Myanmar’s transport infrastructure was extensively damaged by the flooding and landslides, particularly in Chin, Sagaing and Rakhine. Access to essential services in large towns and State capitals was cut off as a result of the flooding and landslides, with destroyed bridges blocking even the most basic mode of transport—foot traffic. A summary of impacts per sectors is included below.

Table 2. Estimated disaster effects (damages and losses) by sector (in USD Million)

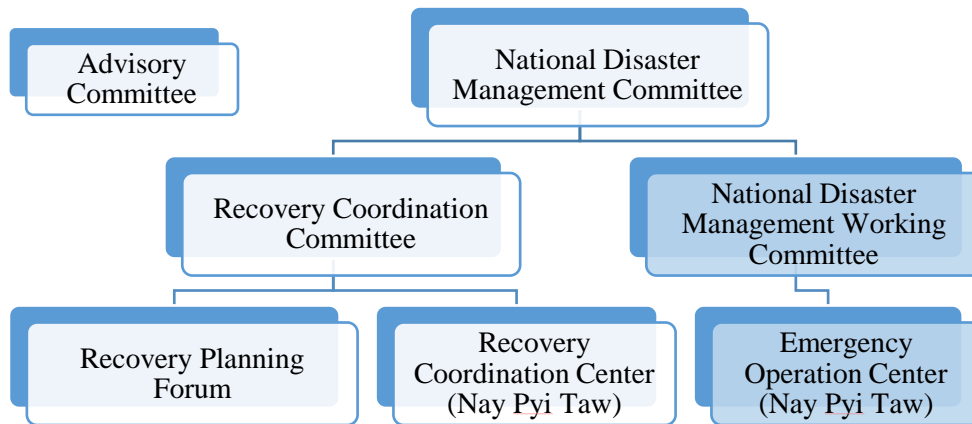
Sector	Damage	Loss	Total
Agriculture, Livestock, Fisheries	48.2	505.7	554.0
Irrigation and Flood Control	10.3	0.0	10.3
Industry and Commerce	42.9	330.5	373.5
Banking and Finance	n/a	n/a	n/a
Health	5.2	1.2	6.4
Education	37.6	1.8	39.4
Housing	394.7	26.5	421.2
Transport	59.2	6.6	65.8
Water and Sanitation	11.5	0.7	12.2
Electricity	4.9	0.5	5.4
Communications	1.0	1.0	1.9
Disaster Risk Management	0.0	18.4	18.4
Gender	n/a	n/a	n/a
Environment	n/a	n/a	n/a
Employment and Livelihoods	n/a	n/a	n/a
Social Protection	n/a	n/a	n/a
Total	615.6	892.9	1,508

Source: GoM, PDNA 2015.

7. **Recovery efforts are led by the Recovery Coordination Committee (RCC), formed on August 10, 2015 chaired by the Union Minister of the Ministry of Construction (MOC).** The RCC was tasked to develop a recovery strategy and established a Recovery Coordination Center to provide operational and information management support to the National Natural Disaster Management Committee (NNDMC) and the RCC. At the national level, the NNDMC is the apex body for disaster management in the country with authority to formulate disaster management policies, issue guidelines, and activate working committees based on disaster needs. In July 2015, the National Natural Disaster Management Working Committee (NNDMWC) took the lead in emergency coordination, communication, and relief-item distribution; it also took the lead in facilitating the inflow of international assistance (cash and in-kind) and in conducting

immediate needs assessments. The RCC consists of 28 members from respective line ministries overseeing overall recovery efforts in the country, and is supported by an Advisory Group, composed of experienced sector specialists, who provided oversight for the PDNA. The coordination framework is outlined in the Figure below.

Figure 1 Recovery Coordination Committee as part of the national response and recovery coordination structure for 2015 flood and landslides



8. **On August 14, 2015, the Vice-President outlined a broad national recovery coordination structure, coordination mechanisms, and guiding principles for building back better.** The Government has also adopted guiding recovery principles that take into account the particular needs of the most vulnerable, including women, youth, people with disabilities and the elderly. The PDNA estimated recovery and reconstruction needs in the order of US\$1.58 billion for the next three years, and provided immediate, short and medium-term recommendations on recovery priorities for specific sectors and cross-sectoral areas. As of October 6, 2015, the government had allocated US\$35.5 million from the President's Reserve Fund, US\$5.4 million from the national government, and US\$18.6 million from state and regional governments to respond to the aftereffects of the disaster⁷. Since then, the government has not released updates on allocations to the disaster response. As of March 1, 2016, Myanmar is reported to have received US\$203 million in contributions from external sources.⁸

9. **Given the scale of impact and urgent financial needs for post-disaster recovery and reconstruction, on June 3, 2016, the GoM requested the activation of the IDA IRM as part of its broader strategy to meet the recovery and reconstruction needs of its population.** On November 25, 2016, the GoM requested additional financing for the IDA IRM. The IDA IRM is part of World Bank's support for Myanmar's reconstruction and recovery efforts. Apart from the support to a government-led PDNA, adjustments have been made under the National Community Driven Development Project (NCDDP) to help restore essential infrastructure in four townships affected by the floods. Transfers were also made to schools ahead of schedule under the

⁷ GoM / National Natural Disaster Management Committee. 2015. Situation Report 6. October 6.

⁸ OCHA Financial Tracking Service.

Decentralizing Funding to Schools Project which has allowed 20,000 schools in 115 townships to start addressing the impact of the floods on their schools. In addition, the World Bank would support financing of the recovery in priority sectors and areas through the proposed Flood and Landslide Emergency Recovery Project, which was approved by the Executive Board of the World Bank's Directors on July 14, 2016.

10. **The IDA IRM is part of GoM's reconstruction and recovery in response to the 2015 floods and landslides emergency, as well as medium-term disaster risk management (DRM) strengthening efforts.** Related to the 2015 emergency, it is foreseen that the IDA IRM will help to close the financing gap, and support recovery in the agriculture, transport, disaster risk management, and communications. IDA IRM will provide essential early recovery materials, supplies, and equipment which will help alleviate suffering of population, and contribute to their immediate needs, and improved resilience. The IDA IRM will finance the purchase of critical machinery and equipment, production inputs, and other goods to provide emergency recovery support. On an exceptional basis and per revisions in July 2018, IDA IRM goods and equipment will also support strengthening of disaster risk management in the medium term. The IDA IRM will cover limited operating expenses related to distribution of procured goods and their effective use during the emergency response of the 2015 disaster only. IDA IRM will not finance any works. Per GoM request from November 25, 2016 for additional financing under the activated IDA IRM, the IDA IRM list of eligible goods and items was expanded to also cover the cost of small roads repairs machinery, emergency supplies and communications goods, and forecasting and meteorological equipment. As under the original IDA IRM request, IDA IRM will not finance any works. While the machinery might be used for emergency repairs, such as opening of roads, clearing debris, or pre-disaster emergency maintenance, or meteorological equipment for hazard monitoring, for example, government funds would be used for any emergency or mitigation works. The geographical scope of the IRM is as follows: (i) the IRM support to the 2015 emergency was limited to the affected states/regions of Sagaing, Magway, Chin, Rakhine, Bago and Ayeyarwaddy as detailed in the original IRM Activation documents; while (ii) support for medium-term DRM and related activities is at the national level.

III. IDA IRM ACTIVATION

A. Activation Conditions and Eligibility

11. **Activation and disbursement conditions:** The IDA IRM funds are to support early recovery activities contributing to resilient reconstruction. As preparatory steps, countries have to: (i) prepare an IDA IRM Operations Manual, acceptable to the Bank, which details the activation and implementation arrangements for the use of the IDA IRM funds, (ii) designate a national authority to approve the IDA IRM Operations Manual and oversee IDA IRM use; and (iii) include Contingent Emergency Response Components (CERC) into projects to channel funds for emergency response. For the activation of the funds, countries have to furnish the World Bank with a formal request with supporting documents including: (i) a copy of the

declaration of an eligible emergency or crisis; (ii) an assessment of the disaster impacts, (iii) a Contingent Emergency Response Plan (CERIP), acceptable to the World Bank, detailing the proposed emergency response activities, expenditures and implementation arrangements. In addition, the Financing Agreements of the CERC projects include as a condition for disbursement, the preparation, if applicable, of any safeguard instruments as may be required in connection with the expenditures to be financed under the CERIP, as well as satisfaction of the Bank that the entities in charge of coordinating and implementing the Emergency Response Part have adequate staff and resources. The World Bank determines whether the emergency or crisis is considered eligible, and whether arrangements set out by the IDA IRM Operations Manual as well as the respective Financing Agreements have been met.

12. **Preparation:** In preparation of the use of IDA IRM, (i) the IDA IRM Operations Manual was developed by the Ministry of Finance (MOF) in consultations with the World Bank, and approved by the Government's IRM Coordination Committee (IRM-CC) in October 2015, and revised in July 2018; (ii) a national authority for IDA IRM (the IRM-CC) was established as mandated by a Government Decree 96/2015 of September 8, 2015; and (iii) Contingent Emergency Response Components have been included in the six projects, as listed in Table 1.

13. **Activation:** The Government through the Ministry of Planning and Finance (MOPF) submitted a request for activation on June 3, 2016 to the World Bank together with necessary supporting documents including: (i) a copy of the Declaration of Natural Disaster Affected areas as stipulated by the Chapter 5, Article 11, of the Natural Disaster Management Law; (ii) a copy of the PDNA conducted in October 2015 which details the damages and losses incurred as well as expected recovery and reconstruction needs; (iii) a CERIP which includes a list of goods and operating expenses to be financed for addressing the emergency response and recovery efforts, with related implementation arrangements. The World Bank East Asia Pacific Regional Vice-President issued his approval of the activation as specified in the IRM Guidance Note and signed the IRM reallocation notice to GoM on June 15, 2016. In line with the disbursement conditions, applicable safeguards instruments necessary for the expenditures to be financed under the CERIP have been developed, namely an Environmental Code of Practice (ECOP) which is included in the CERIP. The concerned beneficiary line ministries have adequate staff and resources to ensure compliance with the safeguards arrangements (see also section C).

14. **Additional financing:** Given large unmet needs, on November 26, 2016, the GoM requested to (i) reallocate an additional amount of US\$13.755 to the IRM component of the National Electrification Project for the IRM, (ii) expand the list of items to be financed under IDA IRM, and (iii) extend the period of IDA IRM implementation until December 31, 2017. In line with this request, the CERIP, this IRM Response Paper, and the ECOP were updated in January 2017. The updated ECOP was reviewed by the World Bank's Regional Safeguards Secretariat.

15. **Extension of Implementation Period:** In June 2017, the implementation period for the IRM was extended to September 30, 2018.

16. **Request from the Government on the continued usage of the goods:** In July 2018, this IDA IRM Response Paper, the Contingency Emergency Response Implementation Plan (CERIP), and the Operations Manual were updated to enable the usage of goods and items procured for the purposes of the CERIP beyond the specific eligible emergency at time of IDA IRM activation for the 2015 floods and landslides, per request from the GoM. The amendment to the IDA IRM Response Paper, CERIP, and the IDA IRM Operations Manual ensures eligibility of expenditures with definition of future use of goods and equipment, and conditions to continue fulfilling relevant World Bank policies and procedures. In line with the implementation arrangements outlined in the IDA IRM Operations Manual and this document, the MOPF will submit annual reports to the World Bank on the use of the equipment by collecting individual reports on the usage of their items prepared by respective agencies, seek advice on any potential issues, and follow World Bank's guidance related to any potential issues. The annual reports will be furnished within three months after the end of the GoM fiscal year until all IDA source projects are closed, in line with their individual closing dates. The reports need to document that goods are used as outlined in this Response Paper and that the negative list of uses is complied with per template included in the Operations Manual and this Response Paper.

17. **Summary:** The World Bank considers that all conditions for activation and disbursement of the IDA IRM have been met. The Bank considers the disaster an eligible crisis or emergency. The Bank has supported the Government in the PDNA and considers this assessment to be sound. The CERIP was developed in consultations with the Bank in line with the arrangements set out by the IDA IRM Operations Manual (see also section C below), and found acceptable by the Bank, based on an internal review in June 2016. The World Bank also considers the additional financing request to be fully in line with the original request based on an internal review in December 2016. The World Bank provided guidance to the Government and confirms the eligibility of using goods and items acquired under the IDA IRM beyond the original objective of IDA IRM, subject to the negative list agreed in the IRM Operations Manual and the CERIP.

B. Use of IDA IRM Funds

18. **Objective:** The original objective of the IDA IRM was to provide emergency recovery support for the 2015 floods and landslides. In July 2018, on exceptional basis, the objective was revised as to (i) provide emergency recovery support for the 2015 floods and landslides, and (ii) to strengthen disaster risk management in the medium term. Disaster risk management is defined as emergency preparedness, mitigation, recovery, and response to a future disaster.

19. **Portfolio status:** The undisbursed portfolio in Myanmar as of June 3, 2016 stood at \$1,275.8 million (\$1.276 billion).

20. **Cost:** The June 3, 2016 request for IDA IRM activation in response to the 2015 floods and landslides was for US\$32 million. This balance - calculated based on the status of the portfolio as of June 3, 2016, in consultations with the GoM - was below the 5 percent of the undisbursed portfolio per IDA IRM. Upon effectiveness of the proposed Floods and Landslides Emergency Recovery Project additional SDR 10.7 million (US\$15 million equivalent at the time of negotiations) was made available to support the activation of IDA IRM in response to the 2015 July-September floods and landslides following the conditions described in this IDA IRM Response Paper. Additional financing was provided on November 26, 2016 in the amount of SDR 10.05 million from the National Electrification Project. The total amount provided under the IRM was within the 5 percent of the investment lending portfolio's undisbursed amount (of the IDA 17 Cycle).

21. **Items to be financed:** IDA IRM will finance items requested by the Ministry of Agriculture, Livestock and Irrigation (MOALI)⁹, Ministry of Social Welfare, Relief and Resettlement (MoSWRR), Ministry of Construction (MOC), and the Ministry of Transportation and Communication (MOTC). The IDA IRM funds will and support recovery in the agriculture, transport, disaster risk management, and communications through essential goods provided such as storage supplies and materials, emergency materials and equipment including technical and communications gear, production inputs, vehicles, small industrial machinery and equipment, roads repairs machinery and supplies, forecasting and meteorological equipment, as well as limited operational costs related to IDA IRM goods distribution and use, in order to provide emergency recovery support for the 2015 floods and landslides, and to strengthen disaster risk management. IDA IRM will not finance any physical civil works. The full list of eligible expenses is enclosed at the end of this Paper. Per agreement with the World Bank, this list can be revised on a no-objection basis, provided the goods and items are fully in line with the stated objectives and conditions, including safeguards compliance, of the IDA IRM activation.

22. **Rationale for items selected related to the 2015 floods and landslides:** The focus of the IDA IRM support directly draws on the PDNA results and recommendations, discussions with the government on their recovery needs, priorities and financing available through GoM, donors, or as part of the WB support package. In terms of sectors (see Table 2), the agriculture sector was the most severely affected, followed by housing and then commerce and industry amounting to 37, 28 and 25 percent of the total disaster effects, respectively. The GoM is supporting the housing sector recovery, and the Floods and Landslides Emergency Recovery Project will help to close the financing gap in the transport sector which was the hardest-hit public sector, supporting the GoM to reconstruct critical public road infrastructure to improved standards in line with build-back-better principles in select State and Regions. IDA IRM would thus finance only small-scale repairs machinery in the transport sector. Based on the damages and needs resulting from the 2015 disaster, IDA IRM would also finance small emergency and

⁹ With respective departments housed formerly at the Ministry of Agriculture and Irrigation (MOAI), the Ministry of Livestock, Fisheries and Rural Development (MLFRD).

communications (including forecasting) goods which were damaged or lacking during the disasters.

23. **Rational for items related to IDA IRM's additional objective related to supporting medium-term DRM:** Investments in critical goods and commodities will help address needs such as equipment and production inputs, as well as help safeguard against vulnerability vis-à-vis future hazards. In light of frequent disaster events, it was agreed that the provision of these items would be the most immediate way of linking relief and medium-recovery / DRM efforts.

24. **The geographical scope of the IRM:** (i) related to the IRM support to the 2015 emergency, the use of goods and items was limited to the affected states/regions of Sagaing, Magway, Chin, Rakhine, Bago and Ayeyarwaddy as detailed in the original IRM Activation documents; (ii) for support of medium-term DRM and related activities, the use of goods and items, including their storage, is at the national level.

25. **Eligibility:** List of eligible expenditure is included in Table 3 of this Response Paper, and is based on the table of eligible expenses as listed in the IDA IRM Operations Manuals (table 2). A list of prohibited uses of the goods and items, applicable to both the original as well as expanded objective of the IDA IRM, is included in the IDA IRM Operations Manual. While the IDA IRM was activated in response to the 2015 floods and landslide, it is foreseen that the goods and equipment would continue be used nation-wide beyond the disaster in line with the IRM objective to support emergency recovery and strengthen disaster risk management subject to conditions of the selected IDA source projects, including social and environmental safeguards as outlined in the IDA IRM Operations Manual and the CERIP. In line with the implementation arrangements outlined below, the MOPF will furnish the World Bank with annual reports on the use of the equipment, seek advice on any potential issues, and follow World Bank's guidance related to any potential issues. The annual reports will be furnished until all IDA source projects are closed, in line with their individual closing dates. The reports need to document that goods are used as outlined in the CERIP and this Response Paper and that the negative list of uses is complied with.

C. IDA IRM Implementation Arrangements

26. The implementation arrangements are in line with the IDA IRM Operations Manual and the CERIP, including the following:

27. **Implementation Period.** As stated in the CERIP, the implementation end date of the IRM support for the 2015 floods and landslide emergency recovery extends until September 30, 2018. By this date, all procurement and disbursement activities should be completed, and for which adequate technical and fiduciary closing will be conducted within a reasonable time following the end of its implementation. Related to the use of goods and equipment related to IRM objective of supporting medium-term DRM, beyond the date of September 30, 2018, is subject to the limitations established in the negative list, as well as monitoring and reporting on

the use of goods and items funded by the IDA IRM continues until the closing of the CERC source projects.

Coordination and implementation oversight

28. **The MOPF** oversees the overall implementation of the IDA IRM in line with its objectives, regularly updating the NNDMC, RCC., Line Ministries involved in IDA IRM, and the World Bank. The MOPF will be responsible for overall financial management and procurement processes that are required to address the emergency. The MOPF will share regular updates to the Coordination Committee, involved Line Ministries, and the World Bank on the progress of implementation of procurement plans and financial reports, respond to requests, and take actions as required. The MOPF will be overall responsible on behalf of the GoM to ensure all activities supported under the IDA IRM will comply with the World Bank's environmental and social safeguard policies, among others, to ensure that the environmental and social management documents are developed and approved by the World Bank, and that the documents are implemented and adequately monitored with regular (annual) updates to the World Bank, seeking advice and assistance from the World bank safeguards specialists on the specific use / situation in advance. The MOPF will monitor the performance involved ministries / agencies continuously, making recommendations for strengthening or setting for implementation priorities.

29. **The World Bank:** The World Bank will provide implementation support, including field visits to ensure the use of the provided funding of in line with the CERIP and the IDA IRM Operations Manual, and based on need provide capacity-building.

30. **Indicators:** At IDA CERC project level, implementation of IDA IRM will be monitored through the following indicator: "Goods procured and distributed as outlined in the CERIP". Reporting and monitoring arrangements are detailed in the IDA IRM Operations Manual.

31. **Line ministries:** In addition to MOPF focal points, respective line ministries' focal points will oversee the satisfactory implementation of IDA IRM financing, including distribution of the acquired items, and coordination with the third-party agent. In addition, the project management unit of the ongoing Agricultural Development Support Project, implemented by MOALI and financed by the World Bank, will oversee and support the implementation of the IDA IRM related to the agriculture sector. In case of need, the project management unit of the National Community Driven Project, implemented by MOALI and financed by the World Bank, will provide additional support. For items requested by the MOCT, the project management unit of the ongoing Ayeyarwady Integrated River Basin Management Project will oversee and support the implementation. For items requested by the MOC, the component 1 management unit of the Myanmar Flood and Landslides Emergency Recovery Project will oversee and support the implementation. For items requested by the Ministry of Welfare Relief and Resettlement, the Department of Disaster Management (formerly the Department of Relief and Resettlement) will oversee implementation with support from the Department of Highways of MOC in case needed.

Implementation

32. **Implementation support:** Due to the urgency or provision of these goods and items under, the GoM will hire a third-party agent - the United Nations Office for Project Services (UNOPS) - to provide procurement, financial management (FM), and delivery of the requested items to be financed, in close coordination with the MOPF and respective line ministries. MoPF will hire UNOPS as a specialized Supplier with the ability to carry out procurement activities in accordance with UNOPS own internal procurement rules, which will enable UNOPS respond to the Government in a timely manner. While overall coordination with UNOPS is headed by the MoPF, respective line ministries will coordinate with the third agent the procurement, FM, and delivery of requested items. Supported by technical specialists and government focal points they will form the IDA IRM Special Implementation Unit as foreseen by the IDA IRM Operations Manual.

33. **Line Ministries:** Implementation on the ground will be carried out by the respective line ministries departments, in close collaboration with regional, district and township authorities. Implementation roles will comprise among others (i) preparing list of equipment and their specifications, (ii) ensuring delivery of the goods to respective locations; and (iii) monitoring including safeguards compliance. The GoM will supply the World Bank with a full list of respective focal points from each involved line ministries and the MoPF.

34. **MOALI:** Selection of beneficiaries will be carried out in consultation with the Village Management Groups and coordinated with the Township Administrative Committees. For the respective MOALI departments, the IDA IRM includes non-works related operating expenses (with prior approval of the World Bank) strictly related to the delivery of procured goods and implementation support. This may include expenses linked to travel and per diems, goods distribution, vaccination and feeding of animals procured for distribution, training and consultation workshops.

- The Department of Agriculture will distribute seeds and fertilizers to households; provide extension staff with motorbikes to increase their mobility that would allow reaching farmers in the remote areas; and strengthen the selected seed farms belonging to the Department of Agriculture to increase production of seeds for immediate multiplication and building resilience to respond better for future crises. It will reequip their mechanization stations to assist households with clearing their farmland from mud and debris, as well as free of charge services for land preparation and cultivation, harvesting, and post-harvest services.
- The Department of Agricultural Land Management and Statistics will purchase land surveying goods and items to assist in restoring borders and contours farm fields in line with the existing land user right certificates.
- The Department of Irrigation and Water Utilization will replace the lost and damaged water pumps and replace the damaged tube wells to restore the access of farmers to water.

- The GoM will hire and supervise as necessary third party agent to carry out procurement and financial management of portion of the IRM funds.

35. **MOC:** The Department of Highways will oversee the implementation of the IDA IRM. IDA IRM includes only goods and operating expenses strictly related to the delivery of procured goods and implementation support) per the list included in this CERIP.

36. **MOSWRR:** The Department of Disaster Management will oversee the implementation of the IDA IRM. IDA IRM includes goods and operating expenses strictly related to the delivery of procured goods and implementation support) per the list included in this CERIP.

37. **MOTC:** The Department of Meteorology and Hydrology, will oversee the implementation of the IDA IRM. IDA IRM includes goods and operating expenses strictly related to the delivery of procured goods and implementation support) per the list included in this CERIP.

Fiduciary aspects

38. **Procurement:** Due to the urgency or provision of these goods and items, it was agreed by the Government that the United Nations Office for Project Services (UNOPS) will be hired to provide procurement, financial management (FM), and delivery of the requested items to be financed as a specialized supplier. The World Bank has provided guidance to the GoM in developing the terms of reference (TORs) for the third-party agent, which provide details on the procurement tasks and arrangements expected. The Bank also worked with UNOPS on the appropriate form of contract which has been shared with Government to use and will be the basis of negotiations between the parties. The agent will be responsible for procurement of goods, consulting services and for supervision and oversight of contracts for the supply of goods until the goods are delivered to their final destination as specified in respective contracts. As a specialized supplier, UNOPS will carry out procurement in accordance with their internal procurement procedures and consistent with Section I of the Bank Procurement Guidelines “Guidelines: Procurement under IBRD Loans and IDA Credits dated January 2011 and revised July 2014.

39. **Disbursements:** Disbursements will be made based on the approved CERIP following the investment project finance (IPF) Policy and are subject to evaluation, examination, and approval by the World Bank, fulfilling all conditions as outlined by the IDA IRM Operations Manual. Withdrawals from designated accounts (DA) will only be permitted for payment of expenses incurred in the context of the emergency based on the CERIP. Given the emergency nature of this mechanism and GoM request to have immediate access to the funds, the full amount can be advanced. Based on this, the full amount is considered ceiling of the DA in the Disbursement Letter. The designated accounts for the IRM should be duly documented and closed within four months after completion of IRM implementation.

40. **Flow of funds** Payment to third-party agent supporting the GoM with IDA IRM (UNOPS) through a designated account opened by MOPF and/or direct payment to third party agent on instruction of GoM. Should any funds transferred from projects not be fully utilized they will be refunded to those projects designated accounts.

Accountability, Monitoring, Reporting

41. **Accountability and audit:** The MOPF will prepare financial reports in line with the IDA IRM activities in timely manner. The financial reports are to be produced half way through the implementation and at the end of implementation. With respect to any payments made to UNOPS for IRM activities, the related financial reports shall be submitted to the GOM with a copy to the World Bank and shall report on: payments received by UNOPS from the GOM or directly from the World Bank on the instructions of GOM, any interest earned, payments/expenditures and accrued commitments for the services, fund balances; and other financial information as specified/required by GOM or the World Bank. For operating expenses relevant to the IDA IRM objective to support the 2015 floods and landslides emergency response, beneficiary line ministry will present the expense report with supporting documents to the MOPF, which in turn will consolidate, and present to the IRM Coordination Committee. The Office of the Auditor General of the Union of Myanmar (OAGM) will, within six months of the commencement of implementation of IDA IRM and signing of contract with UNOPS, conduct an initial audit of the IRM activities in line with this CERIP. UNOPS auditor will audit UNOPS financial report. This audit will be relied on by the OAGM when performing overall IRM audit for the Government accountability purposes The OAGM will carry out a final audit within six months after the completion of the implementation of the IDA IRM objective to support for the 2015 floods and landslide emergency recovery which completes on 30 September 2018. The OAGM will take into account any independent audit conducted by auditors of UNOPS on the IRM related activities.

42. In line with the IDA IRM objectives to (i) provide emergency recovery support for the 2015 floods and landslides, and (ii) to strengthen disaster risk management in the medium term, at the end of the IDA IRM implementation period as set by the CERIP, all the assigned to implementing agencies have an ongoing responsibility for IRM assets' management and use of the IDA IRM goods. The IRM goods should be recorded in a separate page of the fixed asset register by each implementing agency, and submitted to MOPF annually. This will enable timely provision of details to MOPF for the IRM annual report on the management and use of the IRM assets and confirmation that they have been properly used and managed, in line with the conditions for eligible purposes. If any assets have been damaged or lost or transferred to another implementing agency this should be included in MOPF's report. The management of vehicles, motorcycles, boats and equipment, should follow the standard administrative and inventory procedures applicable to other project assets managed by the implementing agency. This will be reviewed by the OAGM during their annual audit of the individual projects financial statements after the IRM implementation period.

Social and Environmental Safeguards

43. **Safeguards:** The IDA IRM Operations Manual was revised in July 2018, reviewed and cleared by World Bank safeguards specialists and World Bank Regional Safeguards Secretariat staff on 2 August 2018. Based on the World Bank review and classification of the items and operating costs listed in the CERIP and the permissible uses defined in the Operations Manual, they are expected to have minimal or no adverse environmental or social impacts. The CERIP does not include any physical works. An Environmental Codes of Practice (ECOP) was prepared for the positive list of goods to be financed under the IDA IRM, which is included in the CERIP.

44. For the agriculture sector goods, the project management unit, including locally-recruited environmental and social safeguards specialists, of the ongoing Agricultural Development Support Project, implemented by MOALI and financed by the World Bank, will oversee and support the implementation of the IDA IRM in line with the ECOP and the existing IRM source project-specific Environment and Social Management Framework (ESMF). In case of need, the project management unit of the National Community Driven Development Project, implemented by MOALI and financed by the World Bank, will provide additional support. For items requested by the Ministry of Transport and Communication (MOCT), the project management unit of the ongoing Ayeyarwady Integrated River Basin Management Project will oversee and ensure safeguards compliance in line with the ECOP and the existing IRM source project-specific ESMF. For items requested by the MOC, the component 1 management unit of the Myanmar Flood and Landslides Emergency Recovery Project will oversee and ensure safeguards compliance in line with the ECOP and the existing IRM source project-specific ESMF. For items requested by the Ministry of Welfare Relief and Resettlement, the Department of Disaster Management will oversee implementation with support from the Department of Highways of MOC in case needed. The GoM should refer to the list of prohibited actions which applies to use and storage for DRM-related activities including hazard monitoring, disaster preparedness, and future response to natural disasters included in this Response Paper. If there is any doubt whether and how national and World Bank safeguards policies apply to specific uses and/or situations under IRM, and how their potential environmental and social risks and impacts should be managed, the Government is encouraged to seek advice and assistance from the World Bank safeguards specialists on the specific use and/or situation in advance. All implementing agencies will annually submit to MOPF the safeguards monitoring template included in the IDA IRM Operations Manual and below.

D. List of Eligible Items

45. The table below presents the list of eligible items for the IDA IRM 2015 floods and landslides response. Per agreement with the World Bank, this list can be revised on a no-objection basis, provided the goods and items are fully in line with the stated objectives and conditions, including safeguards compliance, of the IDA IRM activation. These goods and equipment are eligible for use nation-wide beyond the 2015 floods and landslide response, in line with IDA IRM objective to strengthen DRM, including future emergency preparedness,

mitigation, recovery, and response to future disaster per allowed uses until the legal closing date of the selected IRM source Projects.

Table 3. List of Eligible Items under IDA IRM

	Non-works related operating expenses (with prior approval of the World Bank) strictly related to the delivery of procured goods and implementation support. This may include expenses linked to travel and per diems, goods distribution, vaccination and feeding of animals procured for distribution, training and consultation workshops.
	Items
	Ministry of Agriculture, Livestock and Irrigation
1.	Compound fertilizers
2.	Seeds and seedlings for horticulture crops
3.	Mobile seed processing plants
4.	Materials for warehouse
5.	Cold storage facilities equipment
6.	Moisture meters
7.	Hermetic seal bags and accessories
8.	Supporting of haversack
9.	Combine harvesters
10.	Equipment for land survey teams (such as measuring equipment and software including laptops, Real Time Kinematic (RTK) Global Positioning System (GPS), total station, power generators)
11.	Vehicles (including vehicles for land survey, pick up, and transportation vehicles)
12.	Motorbikes
13.	High speed diesel
14.	PVC Pipes
15.	Water pumps (engine & self priming pump, cuses pump and engine)
16.	12 Volt Battery 100 Ah
17.	Tractors and small-scale agriculture equipment (such as combine harvesters, ploughs, harrows, seeding machines, rotators, dump trucks, mini excavators, including spare parts and tools)
18.	Fuel (including fuel for vehicles, power generators, and back hoes)
	Ministry of Construction
19.	Mobile Asphalt Plants with Decanters and Generators
20.	Asphalt Pavers (Wheel Type)
21.	Tyre Rollers
22.	Vibratory Two Wheel Rollers
23.	Tipplers
24.	Backhoe loaders
25.	Bailey bridge parts
	Ministry of Social Welfare, Relief and Resettlement

26.	Boats (including speed boats, fibre boats, jetties without engine)
27.	Vehicles (including double cabs, wagons)
28.	Motorbikes
29.	Zinc sheet for houses
30.	Small-scale warehouse equipment (fork lifts, wheel loaders)
31.	Life jackets
32.	Tents for multiple people (15 persons)
33.	Tarpaulin rolls
34.	Water pump generators
35.	Communications materials including drones, single side band (SSB) with solar system, walky talky handsets and receivers)
36.	IT emergency materials (rack for server, server, online uninterruptible power supply (UPS) (10 kVA), on line UPS (2 kVA), hardware firewall, network interface, management switch, gigabit switch, router, high performance computers, UPS, remote sensing application /software, geographic information system software)
	Ministry of Transport and Communications
37.	Equipment for automatic weather observation station for Global System for Mobile Communications (GSM) coverage (including sensors, enclosures for data loggers, solar panels, GSM modems, servers and web applications)
38.	Flood early warning system equipment: (Pluvi-ONE systems, complete with rain sensors, lightning sensors, data loggers, solar panels, batteries, General Packet Radio Service (GPRD) modems, acoustic sirens, water-level sensors (ultrasonic), accessories for ultrasonic sensor, poles H.1 m for Pluvi-ONE, Servers and Web Applications)

E. List of Non-Eligible Uses

46. In line with the IDA IRM Operations Manual, the following uses for goods and equipment financed by the IRM are prohibited, which also applies to use and storage for DRM-related activities including emergency preparedness, mitigation, recovery, and response to future natural disasters.

- i. Activities of any type classifiable as Category A pursuant to the Association's Operational Policy (OP) 4.01.
- ii. Activities that would lead to conversion or degradation of critical forest areas, critical natural habitats, and clearing of forests or forest ecosystems.
- iii. Activities affecting protected areas (or buffer zones thereof), other than to rehabilitate areas damaged by previous natural disasters.
- iv. Land reclamation (i.e., drainage of wetlands or filling of water bodies to create land).
- v. Land clearance and leveling in areas that are not affected by debris resulting from the eligible crisis or emergency.
- vi. River training (i.e., realignment, contraction or deepening of an existing river channel, or excavation of a new river channel).

- vii. Activities that will result in the involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households' use of land and livelihoods.
- viii. Construction of new roads, realignment of roads, or expansion of roads, or rehabilitation of roads that are currently located on communal lands but will be registered as government assets after rehabilitation.
- ix. Use of goods and equipment on lands abandoned due to social tension / conflict, or the ownership of the land is disputed or cannot be ascertained
- x. Use of goods and equipment to demolish or remove assets, unless the ownership of the assets can be ascertained and the owners are consulted.
- xi. Uses of goods and equipment involving forced labor, child labor, or other harmful or exploitative forms of labor.
- xii. Uses of goods and equipment for activities that would affect indigenous peoples, unless due consultation and broad support has been documented and confirmed prior to the commencement of the activities.
- xiii. Uses of goods and equipment for military or paramilitary purposes.
- xiv. Uses of goods and equipment in response to conflict, in any area with active military or armed group operations.
- xv. Activities related to returning refugees and internally displaced populations.
- xvi. Activities which, when being carried out, would affect, or involve the use of, water of rivers or of other bodies of water (or their tributaries) which flow through or are bordered by countries other than the Borrower/Recipient, in such a manner as to in any way adversely change the quality or quantity of water flowing to or bordering said countries.

Template: Activities that are not eligible under the IRM

Instructions. Each implementing agency is to indicate if any of the assets are being used for one of the activities below, by circling the appropriate answer (**YES / NO**). The World Bank reserves the right to supervise the use of assets in accordance with the legal agreements of the IRM source projects signed between the Government of Myanmar and the World Bank.

- i. Activities of any type classifiable as Category A pursuant to the Association's Operational Policy (OP) 4.01. **YES / NO**
- ii. Activities that would lead to conversion or degradation of critical forest areas, critical natural habitats, and clearing of forests or forest ecosystems. **YES / NO**
- iii. Activities affecting protected areas (or buffer zones thereof), other than to rehabilitate areas damaged by previous natural disasters. **YES / NO**
- iv. Activities including land reclamation (i.e., drainage of wetlands or filling of water bodies to create land). **YES / NO**
- v. Activities including land clearance and leveling in areas that are not affected by debris resulting from the eligible crisis or emergency. **YES / NO**
- vi. River training (i.e., realignment, contraction or deepening of an existing river channel, or excavation of a new river channel). **YES / NO**
- vii. Activities that will result in the involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households' use of land and livelihoods. **YES / NO**

- viii. Construction of new roads, realignment of roads, or expansion of roads, or rehabilitation of roads that are currently located on communal lands but will be registered as government assets after rehabilitation. **YES / NO**
- ix. Use of goods and equipment on lands abandoned due to social tension / conflict, or the ownership of the land is disputed or cannot be ascertained. **YES / NO**
- x. Use of goods and equipment to demolish or remove assets, unless the ownership of the assets can be ascertained and the owners are consulted. **YES / NO**
- xi. Uses of goods and equipment involving forced labor, child labor, or other harmful or exploitative forms of labor. **YES / NO**
- xii. Uses of goods and equipment for activities that would affect indigenous peoples, unless due consultation and broad support has been documented and confirmed prior to the commencement of the activities. **YES / NO**
- xiii. Uses of goods and equipment for military or paramilitary purposes. **YES / NO**
- xiv. Uses of goods and equipment in response to conflict, in any area with active military or armed group operations. **YES / NO**
- xv. Activities affecting returning refugees and internally displaced populations. **YES / NO**
- xvi. Activities which, when being carried out, would affect, or involve the use of, water of rivers or of other bodies of water (or their tributaries) which flow through or are bordered by countries other than the Borrower/Recipient, in such a manner as to in any way adversely change the quality or quantity of water flowing to or bordering said countries. **YES / NO**

IV. SUMMARY OF PROPOSED ACTIONS

47. **Projects restructuring:** In line with the internal World Bank requirements of IDA IRM activation and reallocations through the CERCs, changes are being made to the source IRM projects, including a change in the project development objective (PDO), and inclusion of an indicator to monitor implementation of the IDA IRM, as suggested below:

- **PDO:** Inclusion of clause/sentence: “[...] and in the event of an Eligible Crisis or Emergency, provide immediate and effective response to such Eligible Crisis or Emergency.”
- **Indicator:** Inclusion of intermediate indicator “Value [USD million] of goods distributed in terms of the project contribution to IDA IRM.”

48. Per IDA IRM Guidance Note of June 2015, Per IDA IRM Guidance Note from June 2015, IDA source projects – except for the Flood and Landslide Emergency Recovery Project – were restructured to enable reallocation to IDA IRM. The details of the projects and the amounts of the proposed reallocation are presented in Table 1 of the Response Paper.

Annex 1: Environmental Codes of Practice:

For the Management of the Prospective Disposal of Goods Purchased from Component 3 IDA Immediate Response Mechanism

Updated November 2016

Context:

Environmental and Social Risk Management (Safeguards)

- The items and goods listed in the CERIP, within their allowed uses, are expected to have minimal or no adverse environmental and social impacts. The CERIP does not include any recovery activities or physical works. However, recognizing that there could be potential negative impacts attributed to the goods bought under the project, especially their disposal after use, the World Bank requires the production and implementation of environmental codes of practice (ECOP) to provide guidance and minimum standards to minimize and manage and risks to environment or human health and safety.
- This is the core objective and function of this document.

I. Approach of ECOP

1. This ECOP has divided the list of eligible goods into 4 categories, with regard to their nature and composition, as well as their relevance in terms of potential adverse environmental and social impacts, where they are discarded as waste:

- (i) disposable goods with inert chemical properties and no physical hazards (e.g. towels, aluminum cooking bowls, soap, blankets, T-shirts; animal feed or drugs)
- (ii) disposable goods with physical, chemical or biological hazards (e.g. empty containers from fuels, lubricants, paints, solvents, or other chemical compounds, glass bottles, pharmaceutical products, general medical waste¹⁰ such as used bandages, empty medication bottles, used syringes);
- (iii) durable goods, that will be in use / operation for years or decades (e.g. tractors, motorcycles, trucks, ambulances, boats, analytical equipment, computers etc.)
- (iv) Durable goods with shorter lifespan and potentially harmful components (mainly discarded electronic / computer hardware)

2. These categories would have very different environmental relevance, where **category (i)** can be entrusted to the existing waste management system, however flawed it may be, without significant risk to environment, health, and safety; **category (iii)** is an issue that lies beyond the projects lifetime and leverage, and this category of goods is expected to outlive the project by years / decades. Also one can assume that the intrinsic value of these products, their parts, components and materials, will very likely create an economic incentive for extensive reuse and recycling.

¹⁰ Additional resources can be found at [Philippines \(Second Health Care Waste and Management Project\)](#); [Cambodia \(Health Sector Reform Projects\)](#) and [Timor Leste \(Health Sector Reform Projects\)](#).

3. The main concern, it would appear, needs to be directed at **category (ii)**, which are potentially hazardous, short-lived products (**see list of goods in Annex 1**). These include e.g. solvents, lubricants, paints, fertilizers, etc. and their containers. For these a general waste management plan that includes hazardous wastes would be appropriate and has been developed. It is unlikely that **medical waste types** will be generated within the scope of project financing, nevertheless a medical waste management plan is included in this ECOP as section IV, in case the need arises.

4. **Category iv** waste types (discarded electronic parts and computer hardware) will need to be collected and stored separately, and transported to collection / recycling centers where they are dismantled, separated into their various components, and fed into the recycling streams for metals, plastics etc.

5. Common hazardous / noxious waste types, such as oils, solvents, paints etc. would have to be safely stored in suitable containers and disposed in a facility designed, constructed and operated for the safe disposal of hazardous wastes. Special facilities will be identified to treat e.g. spent engine oils, or incinerate solvents, paints etc. Such facilities commonly include cement kilns, where organic solvents, oils, bitumen etc. can be incinerated safely under high.

6. For all durable goods, such as vehicles, boats, generators, electronic devices and medical equipment diligent repair and maintenance schedules should be required, and the recipient asked to produce repair and maintenance plans. For their disposal recycling and reuse options should be planned (e.g. recovery of scrap metal and electronic waste), and economic incentives for such identified and promoted.

7. Chemical fertilizers (which usually consist of potassium-phosphates and nitrates) constitute a low chemical or toxicological hazards for humans and the environment. They should not be ingested and need to be stored, handled and used safely to avoid leaching and transport into the drainage network due to excessive application or exposure to strong rains. Their containers (usually plastic bags) can be disposed of as category 1 waste. Residual, unused quantities of waste fall under category ii and are included in the below detailed waste management plan. Given their commercial value and the urgent need, left-over, unused quantities are very unlikely to occur.

8. Medical waste would be incinerated as far as possible, and all remains safely disposed, again in a safely engineered and operated facility. If such facilities do not exist, the provision of mobile incinerators is recommended (which in such case should be included in the list of eligible goods to be procured) and temporary storage in a facility deemed safe, until the country has developed and commissioned a suitable permanent facility. A detailed medical waste management plan is presented in the section below.

II. General Waste Management Plan

WASTE SOURCES AND STREAMS

9. The identified wastes may fall into two main groups of waste types:
- non-hazardous wastes; and
 - hazardous wastes.
10. A Waste Inventory should be produced that covers disposal/treatment options which will be used to manage the wastes generated during construction.

NON HAZARDOUS WASTES

11. A number of non-hazardous wastes could be generated resulting from the goods distributed and purchased through the project. In summary the main non-hazardous construction wastes will include the following:

- Metals (scrap metal);
- Textiles (clothing, towels, tents);
- Timber (packaging materials);
- Containers (steel and plastic);
- Waste paper, card and cardboard (packaging materials);
- Plastics (packaging materials, tarpaulins, bottles);
- Glass bottles.

12. Metals will be provided to the local community (if required) for re-use or stored until an appropriate landfill has been established or recycled if a suitable facility is available. It is expected that the commercial value of scrap metal will facilitate recycling options.

13. Timber, e.g. from redundant untreated wooden packaging will be provided to the local communities for firewood and re-use.

14. In first instance, plastics materials (e.g. bottles) will be recycled. Plastics materials, which are unable to be recycled, will be transferred to a suitable landfill or for storage prior to the development of such landfill.

15. Glass bottles will be segregated and returned to the supplier for reuse, as far as possible. Prime recyclables (eg paper, card, plastics) will, as far as is practicable, be segregated for recovery/recycling. These materials will be supplied to the local community for reuse and recycling or to an approved third party facility.

16. The following options will be used to handle waste containers (which contained non-hazardous materials):

- re-used for storage (including waste storage if suitable);
- returned to supplier (if possible);

- supplied to the local community for re-use;
- disposed to landfill as last resort.

HAZARDOUS WASTES (excl. Medical Waste)

17. These wastes will arise mainly from operation and maintenance of boats, vehicles, generators, equipment and facilities. A number of hazardous wastes may be generated, which include:

- liquid fuels;
- lubricants, hydraulic oils;
- chemicals, such as anti-freeze, anti-corrosion products;
- paints and preservatives;
- original containers for all above;
- spillage control materials used to absorb oil and chemical spillages;
- machine/engine filter cartridges;
- fluorescent light bulbs;
- vehicle batteries
- small batteries, including lithium ion type
- computer and electronics hardware

18. The majority of the hazardous wastes listed above may be incinerated in a suitable facility, e.g. a waste incinerator or cement kiln. The exceptions to this are as follows:

- used lubricants will be returned to the supplier;
- containers for hazardous materials will be re-used for storage of suitable hazardous waste, returned to supplier (if possible);
- fluorescent light bulbs will be crushed and sent to landfill;
- chemical fertilizers will be transported and stored with effective protection from rain, runoff and humidity; they will be used economically, and residual quantities returned to safe, dry storage facilities until further use; unused quantities will be left in / repackaged with the original containers and either used at a later point, or disposed on an existing, licensed landfill.
- batteries and electronic waste will be collected and batched, and transported to specialized companies periodically for dismantling, separation and recycling.

STORAGE AND HANDLING PROCEDURES

19. This section discusses the measures and procedures (prior to treatment and/or disposal), which will be taken to manage waste produced at site level and ensure a Duty of Care is maintained by the good's recipients with respect to wastes for which recipients are deemed the holders. The management measures are discussed in the following order of priorities:

- Classification;
- Inventories;

- Handling;
- Labelling;
- Storage and Segregation; and
- Transport/transfer of waste.

WASTE TREATMENT AND DISPOSAL

REUSE/RECYCLE

20. Once wastes have been produced the first step in dealing with the wastes will be to endeavor to reuse or recycle the wastes where possible to reduce the volume of waste, which needs to be treated or disposed. Materials will either be sent for reuse/recycling directly from the site at which the waste is produced or from the central waste accommodation area.

Table 1: Reusable and Recyclable Wastes

Waste	Reuse/Recycle method
Waste vegetable matter	Waste vegetable matter ONLY may be provided to the local community to be used as pig feed.
Waste paper, card and cardboard	Provided to local community for reuse or to approved recycling plant
Plastics	Either sent to recycling plant for chipping / and/or provided to local community for reuse.
Glass Bottles	Returned to supplier for reuse, or to a recycling enterprise
Lubricating Oil	Returned to supplier.
Timber	Timber packaging (which cannot be reused) will be made available for communities to use as firewood.
Metal	If possible provided to local community for reuse or to a third party company for export and recycling
Containers (metal and Plastic)	Reused by for storage, returned to supplier or provided to local community for reuse (non-hazardous materials ONLY).

TREATMENT AND DISPOSAL

21. In the event that the waste produced cannot be reused or recycled it is anticipated that the following waste treatment/disposal methods will be employed:

- Incineration;
- Landfill.

22. The treatment and disposal options, which will be used to manage each type of waste, should be identified in the provisional goods inventory once they have been procured.

USE OF APPROVED FACILITIES

23. Waste will only be transferred to third parties with appropriately permitted/licensed facilities under Myanmar's legislation that are capable of handling, utilizing, recovering, recycling, treating and/or disposing of the waste in a safe and environmentally sound manner. Third parties facilities will be periodically audited to determine the suitability of the facilities and whether transferred waste are being/have been managed appropriately. Transfer of waste to third parties must be fully documented on Waste Transfer Forms.

Hazardous and Non Hazardous waste Landfill

24. A certain landfill capacity will be required even if wastes are incinerated as not all solid refuse type wastes can be incinerated and incineration gives rise to residues which must be properly disposed of.

25. Non-hazardous waste may be disposed of to either non-hazardous waste landfill, providing it is designed, managed and licensed according to directive requirements. Hazardous waste will be disposed to a hazardous waste landfill.

TEMPORARY WASTE STORAGE

26. If suitable and approved facilities, in particular the incinerators and landfill, should not be available in time for the beginning emergency response activities under the project, interim storage of the wastes produced will be allowed on a case by case basis, until suitable treatment and disposal facilities have been developed.

III. Medical Waste Management Plan

27. The following provisions shall be duly considered and implemented by the Recipient, where goods are supplied under the emergency recovery project that - upon their disposal - would constitute medical waste, or any subcategory thereunder, such as biohazardous waste or infectious sharps.

DEFINITIONS

28. **Biohazardous waste** is waste that may contain pathogens capable of replication and of causing disease in humans, animals or plants.

29. **Medical waste** is biohazardous waste and/or sharps waste that may contain agents infectious to humans. Medical waste includes biohazardous waste capable of causing disease only in humans.

30. Medical waste does not include the following:

- (i) Waste generated in food processing or biotechnology that does not contain an agent infectious to humans.
- (ii) Sharps waste not contaminated with medical waste. Note that nonmedical waste sharps must be disposed of in nonmedical waste sharps containers.
- (iii) Waste generated in biotechnology that does not contain human or animal blood or blood products suspected of being contaminated with agents infectious to humans.
- (iv) Urine, feces, saliva, sputum, nasal secretions, sweat, tears and vomitus unless they contain fluid blood from humans or animals known or suspected (treated with agents or show symptoms) to have agents infectious humans.
- (v) Non-biohazardous waste such as paper towels, surgical gowns or bandages that contain non-fluid blood.
- (vi) Hazardous chemical waste, radioactive waste and household waste.
- (vii) Waste generated from normal and legal veterinary, agricultural, and livestock - management practices on a farm or ranch.

31. **Medical sharps waste** is discarded material that has acute rigid corners, edges or protuberances capable of cutting or piercing as described below:

- (i) All discarded hypodermic needles attached to syringes or tubing as well as blades and syringes contaminated with medical waste.
- (ii) Discarded medical appliances, sharp devices, broken glass or plastic laboratory equipment, Pasteur pipettes, vacutainer tubes, etc. that are contaminated with medical waste.

32. **Agents infectious to humans** include but are not limited to viruses, bacteria, Chlamydia, rickettsia, protozoa, and fungi that are known to cause disease in humans.

33. **Biohazard bags** are disposable, commonly red bags of sufficient strength to preclude ripping, tearing or bursting under normal use and handling when full. The bag must meet rigorous standards, e.g. Standard D 1709-85 prescribed by American Society for Testing and Materials (ASTM) and must be certified by the bag manufacturer. Bags must be conspicuously labeled with the words "BIOHAZARDOUS WASTE" or with the international biohazard symbol and the word "BIOHAZARD."

34. **Sharps containers** are rigid, puncture-resistant containers that, when sealed, are leak resistant and cannot be reopened without great difficulty. Medical waste sharps containers must be labeled with the international biohazard symbol and the word "BIOHAZARD."

35. **Mixed hazardous or radioactive wastes** contain a mixture of two or more of the following: medical waste, radiological waste and hazardous chemical waste.

SEGREGATION, CONTAINMENT, LABELING AND COLLECTION OF MEDICAL WASTE

Segregation and containment of medical waste

36. Medical waste will be segregated at the point of generation. Waste will be placed in RED biohazard bags labeled with the words “BIOHAZARDOUS WASTE” or with the international biohazard symbol and the word “BIOHAZARD.” Biohazard bags will be sealed at the point of origin to prevent leakage or expulsion of contents when they are ready for transport, treatment and disposal.

37. Biohazard bags will be labeled with a location identification, or affixed with a pre-printed sticker, indicating where the waste is generated. Bags will be placed in labeled, leak-proof secondary containers with tight-fitting covers. Medical waste bags will not be removed from the secondary container except for transfer to another secondary container or to the secondary storage container at the storage/accumulation site. Bags should not weigh more than 40 pounds.

38. Secondary containers must be labeled with the words “BIOHAZARDOUS WASTE” or with the international biohazard symbol and the word “BIOHAZARD” on the lid and on the sides, so as to be visible from any lateral direction.

39. Bagged medical waste will be transported in secondary containers to the designated storage/accumulation site and removed only when transferred into other secondary containers.

Disposal of sharps

40. Medical waste sharps will be placed in approved medical waste sharps containers prior to disposal. Medical waste sharps containers will be labeled with the generator’s building and room number. Approved medical waste sharps containers must be labeled with the words “BIOHAZARDOUS WASTE” or with the international biohazard symbol and the word “BIOHAZARD.” When full (contents reach fill line), transport the sharps containers to the designated accumulation site and place in labeled medical waste containers.

41. Note: Nonmedical sharps will be placed in sharps containers or other rigid, puncture-resistant, leak-resistant containers with a tight fitting lid that are not labeled as medical waste. These containers must not have biohazard symbols or any wording indicating medical waste, biohazard waste or biohazard materials.

Disposal of fluids

42. Human and non-human primate blood and body fluids, and the blood and body fluids of animals known or suspected to harbor human infectious agents, must be treated by adding chlorine bleach to a final concentration of at least 10%, and incubating for at least 30 minutes. The treated material can be disposed in the sanitary sewer. If liquid medical waste cannot be disposed of to an existing sewage system connected to a functioning wastewater treatment plant (WWTP), contact alternative disposal methods should be identified, which could include transport in safe, sealed, leak-proof containers to WWTPs that can process the residual liquids.

Mixed hazardous or radioactive waste handling

43. Medical waste containing hazardous chemicals requires special handling, transporting, treating and/or disposal methods. This waste is handled on a case-by-case basis.

44. Medical waste containing radioactive materials requires special handling, transportation and disposal and is handled as required by our campus-broad scope license for use of radioactive materials.

MEDICAL WASTE STORAGE / ACCUMULATION SITE

Containment

45. Medical waste will be placed either in red biohazard bags within an approved secondary container or into a sharps container, as appropriate, at the generation point. Medical waste may be stored at room temperature up to seven days after generation before treatment.

Site security

46. Secure EH&S-approved storage enclosures and accumulation areas by locking access doors or receptacle lids to prevent unauthorized entry. Medical waste in secondary containers must not be stored in unsecured, common-use rooms including autoclave rooms.

47. Post a sign on the exterior of entry doors, or adjacent to the entry doors. The sign must include the warning: “CAUTION – BIOHAZARDOUS WASTE STORAGE AREA – UNAUTHORIZED PERSONS KEEP OUT” in the appropriate local language(s), as well as the universal biohazard symbol (see figure 1 below).

Figure 1: International biohazard symbol



TREATMENT AND TRACKING RECORDS

48. A medical waste generator required to register pursuant to this chapter shall maintain individual treatment, and tracking records, if applicable, for three years, or for the period specified in the regulations, and shall report or submit to the enforcement agency, upon request, both of the following:

- (i) Treatment operating records.

- (ii) An emergency action plan complying with regulations adopted by the California Department of Public Health.

DISINFECTING MEDICAL WASTE SPILLS AND DECONTAMINATING CONTAINERS

Secondary-container disinfection

49. Secondary containers for biohazard bags will be disinfected once every 30 days or whenever leakage occurs from the bags. One of the following chemical sanitizers should be used:

- (i) Hypochlorite solution (500 ppm available chlorine)
- (ii) Iodophore solution (100 ppm available iodine)
- (iii) Quaternary ammonium solution (400 ppm active agent)

50. The container will be rinsed, sprayed or immersed in the sanitizer. The sanitizer will remain in contact with container surfaces for a minimum of three minutes before washing.

Procedures for using disinfectants for spills

51. Use appropriate commercial disinfectants, and follow label directions. The minimum required contact time for decontamination must be based on a risk assessment of the material to be decontaminated and the disinfectant properties. The risk assessment must be documented in the site's / location's safety manual.

52. Spill cleanup materials must be disposed as medical waste.

DISPOSAL

53. There are two options for the final disposal of medical waste:

54. **If licensed specialized contractors are available**, these should be identified and their credentials documented (including address of headquarters and disposal facilities, range of services / wastes for acceptance and appropriate licenses). Whenever waste is transferred from the generator to the disposal firm, types, quantities (weight and volume), containments and condition (solid / liquid) need to be documented. All medical wastes need to be handed over in properly labeled containers that are leak-proof and puncture-resistant and are tightly sealed to prevent escape of fluids or material. The waste then must be incinerated prior to disposal in a licensed and approved sanitary landfill, or safely stored in an alternative, temporary location, if such landfill is not available. This temporary storage facility should be inspected and approved on a case by case basis.

55. **If no licensed specialized contractors are available**, the generating facility must have appropriate facilities for the safe decontamination and / or destruction of medical wastes.

56. Part of the medical waste generated at such facilities - specifically sharps, blood, body fluids, and cultures and stocks and only - is decontaminated on-site by autoclaving (or another method to be specified and approved) prior to disposal in a sanitary landfill. If a licensed and approved sanitary landfill is unavailable the residue may be stored on site in a safe containment that is inaccessible to unauthorized persons, on a temporary basis. Examples for such storage could be e.g. leak-proof and puncture-resistant containers stored in a lined pit, or a secured warehouse.

57. Pathological and / or contaminated waste (human tissue, used bandages) is incinerated in an on-site incinerator prior to disposal in a sanitary landfill (or, if such landfill is not available, on site in an appropriate temporary facility (see paragraph above). The on-site incinerator should be designed to handle the required volume of medical waste (expressed in weight per time unit, e.g. kg/day) and operate at a temperature of at least 1,000°C. The incinerator should be licensed under Myanmar's regulations and inspected regularly for proper maintenance and operation.

58. **Measures must be taken to minimize exposure of the facility's employees** to infectious agents throughout the process of handling and disposing of the medical waste. Training should be provided upon hire regarding proper handling of medical waste, and is performed before the employee assumes duties that involve handling of medical waste. All employees should receive refresher training when a change in the medical waste management plan directly affects the employee's duties. Records should be maintained at the facility, which includes the employee's name, job classification, and dates of training as required. Training records are maintained for a minimum of 3 years. Personal protection equipment must be made available and its use enforced by facility management.

IV. EMERGENCY PLANNING

59. In the event of e.g. a natural disaster that may interfere with the disposal of medical waste, all nonessential, medical-waste-generating activities will be suspended immediately. Spills and releases of bio-hazardous agents will be handled by the site's / location's appropriate emergency response unit, such as Fire Department, Emergency Response Team, or similar, in conjunction with location's EH&S department and local police department.

V. TRAINING

60. The recipient will provide sufficient training to all staff to ensure that they are aware of the relevant aspects of the WMP and are able to fulfil their waste management roles and functions. Specific training will be provided to employees with specific duties associated with the implementation of this waste management plan. At project inception all staff must be made aware and trained regarding waste management requirements, and new onboarding staff needs to receive a full training as well. The project management unit will be responsible for training all concerned staff.

Annex 1: List of Eligible Goods

	Non-works related operating expenses (with prior approval of the World Bank) strictly related to the delivery of procured goods and implementation support. This may include expenses linked to travel and per diems, goods distribution, vaccination and feeding of animals procured for distribution, training and consultation workshops.
	Items
	Ministry of Agriculture, Livestock and Irrigation
1.	Compound fertilizers
2.	Seeds and seedlings for horticulture crops
3.	Mobile seed processing plants
4.	Materials for warehouse
5.	Cold storage facilities equipment
6.	Moisture meters
7.	Hermetic seal bags and accessories
8.	Supporting of haversack
9.	Combine harvesters
10.	Equipment for land survey teams (such as measuring equipment and software including laptops, Real Time Kinematic (RTK) Global Positioning System (GPS), total station, power generators)
11.	Vehicles (including vehicles for land survey, pick up, and transportation vehicles)
12.	Motorbikes
13.	High speed diesel
14.	PVC Pipes
15.	Water pumps (engine & self priming pump, cuses pump and engine)
16.	12 Volt Battery 100 Ah
17.	Tractors and small-scale agriculture equipment (such as combine harvesters, ploughs, harrows, seeding machines, rotators, dump trucks, mini excavators, including spare parts and tools)
18.	Fuel (including fuel for vehicles, power generators, and back hoes)
	Ministry of Construction
19.	Mobile Asphalt Plants with Decanters and Generators
20.	Asphalt Pavers (Wheel Type)
21.	Tyre Rollers
22.	Vibratory Two Wheel Rollers
23.	Tippers
24.	Backhoe loaders
25.	Bailey bridge parts
	Ministry of Social Welfare, Relief and Resettlement
26.	Boats (including speed boats, fibre boats, jetties without engine)
27.	Vehicles (including double cabs, wagons)
28.	Motorbikes
29.	Zinc sheet for houses

30.	Small-scale warehouse equipment (fork lifts, wheel loaders)
31.	Life jackets
32.	Tents for multiple people (15 persons)
33.	Tarpaulin rolls
34.	Water pump generators
35.	Communications materials (drones, single side band (SSB) with solar system, walky talky handsets and receivers)
36.	IT emergency materials (rack for server, server, online uninterruptible power supply (UPS) (10 kVA), on line UPS (2 kVA), hardware firewall, network interface, management switch, gigabit switch, router, high performance computers, UPS, remote sensing application /software, geographic information system software)
	Ministry of Transport and Communications
37.	Equipment for automatic weather observation station for Global System for Mobile Communications (GSM) coverage (including sensors, enclosures for data loggers, solar panels, GSM modems, servers and web applications)
38.	Flood early warning system equipment: (Pluvi-ONE systems, complete with rain sensors, lightning sensors, data loggers, solar panels, batteries, General Packet Radio Service (GPRD) modems, acoustic sirens, water-level sensors (ultrasonic), accessories for ultrasonic sensor, poles H.1 m for Pluvi-ONE, Servers and Web Applications)