

AWS – Water Stewardship Plan



ALLIANCE FOR
WATER STEWARDSHIP

Water Stewardship Plan

Sr.	Project	Project Scope	Objective/Challenges	Action	Deliverables	AWS Outcome	Responsible	Accountable	Consulted	Informed	Value Creation	Current Status
1	Achievement of Water Recycling Ratio Target	Internal	1. Achievement of PTC's Annual Water Recycling Ratio Target	1. Completion of Water Initiatives planned and maintaining Enercon Daily Management System (DMS) Drumbeat	41%	Sustainable Water Balance	Engineering Site and Services Manager	Engineering Site and Services Manager	EHS Manager	EHS Manager	Water Saving	Done
2	Achievement of Water withdrawn Target	Internal	1. Achievement of PTC's Annual Water withdrawn Target	1. Completion of Water Initiatives planned and maintaining Enercon Daily Management System (DMS) Drumbeat	92,674 M3	Sustainable Water Balance	Engineering Site and Services Manager	Engineering Site and Services Manager	EHS Manager	EHS Manager	Water Saving	Done
3	Replacement of Pressure Vessels Site Wide	Internal	Minimize the Water Losses from Steam Leakages	Installation of New Pressure Vessels of Company in Factory and GLT	Overall reduction in Steam Leakages hence resulting in Water savings for Steam Generation	Sustainable Water Balance	Primary Services Officer	Engineering Site and Services Manager	HOD's	Factory Manager	Water Saving	Done
4	Installation of Drinking Water filtration plant with Activated Alumina	Internal	1. Improve Drinking Water Quality by Reducing the Selenium in water which increases due to seasonal changes 2. Reduce Total Colony Count in Drinking Water	Installation of Filtration Plants with Highly Absorptive Activated Alumina Media	Water Quality Improvement	Improved Water Quality	EHS Manager	1. EHS 2. ESSM	HOD's	Factory Manager	Water Quality	Done
5	Installation of Water Softener Plant at ETP	Internal	1. Reduce Hardness of Treated water in order to utilize this Water in Cooling Towers	Installation of water softening Plant	Reduction of Calcium and Magnesium in effluent treated water using Ion Exchange Method	Important Water Related Areas	1. Primary Services Officer 2. Projects Manager	Engineering Site and Services Manager	HOD's	Factory Manager	Water Saving	Done
6	Site-wide mist taps installation	Internal	1. Reduction in Water wastage 2. Reduction in water extraction	Installation of Mist Taps on site	1000 M3 Water Reduction	Important Water Related Areas(IWRA's)	Factory Utilities Manager	Engineering Site and Services Manager	Engineering Site and Services Manager	Factory Manager	Water Saving	WIP
7	Industrial Dishwasher Installation	Internal	1. Minimize the water loss during dishwashing activity 2. Overall reduction in Freshwater Usage	Procurement and installation of Dishwasher	1500 M3 Water reduction Annually	Important Water Related Areas(IWRA's)	EHS Manager	HR Manager	Engineering Site and Services Manager	Factory Manager	Water Saving	Planned
8	CPS Dryer Condensate Recovery	Internal	1. Recovery of Condensate water from CPS	Installation of condensate recovery line from CPS dryer to Boiler House PMD condensate Tank	2600m3/Yr Avg 1m3 /Operation	Important Water Related Areas(IWRA's)	1. Primary Services Officer 2. Services Engineer	Facilities and Utilities Manager	Engineering Site and Services Manager	Factory Manager	Water Saving	Done
9	CVS waste water used for SMD AHUs	Internal	1. Reduction in Fresh Water usage 2. Recycling Ration increase	1. Installation of Pump for recirculation 2. Installation of Water line for the transportation of Water 3. Underground Storage tank for waste water collection	3000 M3 Water Savings	Important Water Related Areas(IWRA's)	1. Primary Services Officer 2. Services Engineer	Facilities and Utilities Manager	ESSM EHS	Factory Manager	Water Saving	Done
10	Under Water pipe Lines to be replaced with Above Ground Lines (Factory)	Internal	1. Eliminate unnoticed underground water losses 2. Eliminate Delays in rectification of Leaks hence resulting in water losses reduction	1.Site Wide Fresh Water Lines to be shifted above ground level	10 to 15 Percent Reduction in Fresh Water Losses	Important Water Related Areas(IWRA's)	1. Primary Services Officer 2. Services Engineer	1. EHS Manager 2. Facilities and Utilities Manager	Engineering Site and Services Manager	Factory Manager	Water Saving	Planned
11	Process Water & Rainwater Drain segregation	Internal	Segregation of Rain Water and Process Water	1. Site Wide Restructuring of Drain Water Lines and Process Water Darin Lines	Overall reduction in Ground Water abstraction	Important Water Related Areas(IWRA's)	EHS Manager	1. EHS Manager 2. ESSM	Engineering Site and Services Manager	Factory Manager	Water Saving	WIP
12	Rain water Harvesting	Internal	Rainwater Harvesting to use rainwater in process post treatment	1. Construction of Water Collection Tank for the storage of Rain Water	Overall reduction in Ground Water abstraction	Important Water Related Areas(IWRA's)	EHS Manager	1. EHS Manager 2. ESSM	Engineering Site and Services Manager	Factory Manager	Water Saving	Planned
13	Reactivation of Sludge Circulation System	Internal	Reactivation of Sludge Circulation System in the Effluent Treatment Plant	Installation of Circulation System along with respective pumps for the continuous circulation of sludge	Proper Sludge circulation system activation	1. Important Water Related Areas(IWRA's) 2. WASH	1. Primary Services Officer 2. Services Engineer	1. Facilities and Utilities Manager 2. Environment Health and Safety Manager	Engineering Site and Services Manager	Factory Manager	Water Saving	Done
14	Blower Installation for ETP	Internal	1. Stand by Blower installation for ETP	1. Procurement and Installation of New Blower Pump for the ETP	Provision of Standby Blower	Important Water Related Areas(IWRA's)	1. Primary Services Officer 2. Services Engineer	1. Facilities and Utilities Manager 2. Environment Health and Safety Manager	Engineering Site and Services Manager	Factory Manager	Water Saving	Done

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15	interconnectivity of Overhead Tanks for backup water supplies	Internal	Interconnectivity of Overhead tanks in order to supply water from one tank to another in case of emergency	1. Installation of Multidirectional Centrifugal Pumps to pump water from one tank to another and vice versa. 2. Installation of Water Lines for the transportation of water in between Overhead Tanks	1. interconnectivity of all tube wells for every water storage on site	Important Water Related Areas(IWRA's)	1. Primary Services Officer 2. Services Engineer	Facilities and Utilities Manager	Engineering Site and Services Manager	Factory Manager	Reputational	Done
16	Installation of Drip Irrigation Systems	External	1. Reduction in water usage for irrigation purposes 2. Implementation of Irrigation best practices and introduction of technology	1. Installation of 215 units of Drip Irrigation System in Leaf Areas	Efficient methods of irrigation	Important Water Related Areas(IWRA's)	1. Leaf Sustainability Manager	Leaf Sustainability and external affairs manager	Head of Leaf Lex	LEX	Water Saving	Done
17	Installation of Drip Irrigation Systems	External	1. Reduction in water usage for irrigation purposes 2. Implementation of Irrigation best practices and introduction of technology	1. Installation of 200 units of Drip Irrigation System in Leaf Areas	Efficient methods of irrigation	Important Water Related Areas(IWRA's)	1. Leaf Sustainability Manager	Leaf Sustainability and external affairs manager	Head of Leaf Lex	LEX	Water Saving	Planned
18	Installation of Generator for Water for Life Project	External	Provision of Water for irrigation of agricultural land on mountainous Ares in Buner	Installation of Generators to operate Water lifting pumps	Provision of water for irrigation purposes	Important Water Related Areas(IWRA's)	1. Leaf Sustainability Manager	Leaf Sustainability and external affairs manager	Head of Leaf Lex	LEX	Economic	Done
19	Installation of Drinking Water Filtration Plants	External	Provision of Safe Drinking water for the community people	1. Installation of Water Filter plants Solar operated in Catchment and beyond	Safe Clean and Drinking water availability for All	Safe Water, Sanitation and hygiene for All	1. LEX Team 2. Projects Manager	LEX Team	1. Engineering Site and Services Manager 2. Regulatory Affairs Manager 3. LEX Manager	Director LEX	Water Quality	Done
20	Distribution of tree saplings for afforestation purpose	External	Promote Afforestation in the catchment and beyond	1. Provision of Tree Saplings to farmers in Leaf Areas	Promote Afforestation	Important Water Related Areas(IWRA's)	1. Leaf Sustainability Manager	Leaf Sustainability and external affairs manager	Head of Leaf Lex	LEX	Social	On Going
21	Admin Washroom Renovation	Internal	1. Renovation of washroom to provide wheel chair accessible washroom 2. Overall increase the number of toilets to serve as per the requirement 3. Overall renovation to eliminate any unnoticed leakages	1. Carry out renovation of Both Washrooms in Admin	1. Renovation of washroom to provide wheel chair accessible washroom 2. Overall increase the number of toilets to serve as per the requirement 3. Overall renovation to eliminate any unnoticed leakages	Safe Water, Sanitation and hygiene for All	1. Civil In charge 2. Services Engineer	Facilities and Utilities Manager	Engineering Site and Services Manager	Factory Manager	Reputational	Done
22	Admin Ladies Washroom Renovation	Internal	1. Renovation of washroom to provide all the required facilities 2. Provision of abluion area 3. Overall renovation to eliminate any unnoticed leakages 4. Provision of more hygienic infrastructure	1. Carry out renovation of Both Washrooms in Admin	1. Provision of Hygienic Infrastructure 2. Provision of Sanitary facilities	Safe Water, Sanitation and hygiene for All	1. Civil In charge 2. Services Engineer	Facilities and Utilities Manager	Engineering Site and Services Manager	Factory Manager	Reputational	Done
23	SMD Ladies Washroom Renovation	Internal	1. Provision of more hygienic infrastructure to ensure good housekeeping 2. provision of sanitary facilities	1. Carry out renovation of Both Washrooms in Admin	1. Provision of Hygienic Infrastructure 2. Provision of Sanitary facilities	Safe Water, Sanitation and hygiene for All	1. Civil In charge 2. Services Engineer	Facilities and Utilities Manager	Engineering Site and Services Manager	Factory Manager	Reputational	Done
24	SMD Staff Washroom Renovation	Internal	1. Improve overall infrastructure (Toilets, Doors, Washbasins) 2. Provision of Ablution area 3. Overall provision of hygienic infrastructure	1. All washroom Doors replacement 2. All Washroom Toilets Replacement 3. Provision of Ablution Area	1. Provision of Ablution area 2. Provision of New toilets 3. Improvement in overall infrastructure	Safe Water, Sanitation and hygiene for All	1. Civil In charge 2. Services Engineer	Facilities and Utilities Manager	Engineering Site and Services Manager	Factory Manager	Reputational	Done
25	Labor Washroom Admin	Internal	1. Improvement of Civil infrastructure 2. Replacement of Broken Water Taps 3. Rectification of issues/ Defects	1. Carry out Civil work on outside 2. Repaid of Washrooms inside and outside 3. Repair and maintenance of defects	1. Improvement of Civil infrastructure 2. Replacement of Broken Water Taps 3. Rectification of issues/ Defects	Safe Water, Sanitation and hygiene for All	1. Civil In charge 2. Services Engineer	Facilities and Utilities Manager	Engineering Site and Services Manager	Factory Manager	Reputational	Done
26	Installation of Flow Meters on Condensate Lines	Internal	1. Quantification of Condensate recovered water	Procurement and installation of Flow meters	1. More efficient data gathering on water recovered	Good Water Governance	Factory Utilities Manager	Engineering Site and Services Manager	Engineering Site and Services Manager	Factory Manager	Water Saving	Done
27	Farmer's Session on Irrigation best practices	External	1. Awareness on Water Scarcity 2. Knowledge Sharing on Best Practices for irrigation 3. Knowledge sharing on WASH Condition in Area 4. Interaction with Area Stakeholder and understand their concerns	1. Arrange session in for the farmers of catchment 2. Share best practices being implemented across Pakistan 3. Call village Nazim's and understand their concerns 4. Share Shared Water Challenges	1. Knowledge Sharing 2. Awareness 3. Stakeholder Engagement	Important Water Related Areas(IWRA's)	AWS Lead	EHS Manager AWS Lead	EHS Manager AWS Team	External Affairs Manager	Economic	Done

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28	Water Quality Monitoring in the Catchment	External	1. Water Quality of Drinking water in the catchment 2. Impact of pesticides on Ground Water in the catchment 3. Evaluation of impact of water water lines on ground water	1. Water sampling from the Catchment 2. Water Sampling from the nearby farms 3. Water Sampling from Upper Aquifer 4. Water Sampling near the community drain 5. Water sampling of River Water	1. Drinking Water Quality from Aquifers 2. Evaluation of impacts on Ground water from Activities in the catchment	Improved Water Quality	AWS Lead	EHS Manager AWS Lead	EHS Manager AWS Team	External Affairs Manager	Water Quality	Done
29	Wash Campaign	External	1. An Extensive Campaign in the catchment on Water Quality Awareness and Water Treatment practices 2. An Extensive Campaign on Water saving guidance	1. Designing and prating of Flexes on Water Saving guidance and Water Treatment methods 2. Printing of Posters 3. Selection of Common points in Catchment to paste the flexes 4. Pasting of Flexes in Catchment	1. Awards on Water Quality 2. Awareness on Water Saving	1.Safe Water, Sanitation and hygiene for All 2. Important Water Related Areas	AWS Team	AWS Lead EHS Manager	AWS TEAM	External Affairs Manager	Social	Done
30	Engagement with WWF	External	Engagement with WWF to seek information about our catchment and consult on AWS Implementation	Conduct a meeting with WWF to share our progress and seek advice	1. Consultation 2. Data Collection	1.Safe Water, Sanitation and hygiene for All 2. Important Water Related Areas	AWS Team	AWS Lead EHS Manager	AWS TEAM	External Affairs Manager	Social	Done
31	WASH Session in Ummah Children Academy	External	1. Conduct a Session on Safe Hygiene Practices for Children and distribute Hygiene Kits	1. Arrange a session on Safety Hygiene practices for children of Ummah Academy 2. Session to be conducted by Profession Doctors	Collaboration with stakeholder	Safe Water, Sanitation and hygiene for All	AWS Team	AWS Lead EHS Manager	AWS TEAM	External Affairs Manager	Social	DROPPED
32	Marble Factory Visit	External	Engagement with Marble Factory in the catchment to understand their water usage and help them in water saving initiatives	Visit of nearby marble factory to understand their daily water usage and disposal. Brief them on our water initiatives	1. Engagement with Stake Holder 2. Information Sharing	1.Safe Water, Sanitation and hygiene for All 2. Important Water Related Areas	AWS Team	AWS Lead EHS Manager	AWS TEAM	External Affairs Manager	Social	Done
33	Engagement with Nestle	External	1.Engagement with Nestle on AWS Knowledge Sharing	Brief them on Water initiatives and AWS and make them your stakeholder	1. Engagement with Stake Holder 2. Information Sharing	1.Safe Water, Sanitation and hygiene for All 2. Important Water Related Areas	AWS Team	AWS Lead EHS Manager	AWS TEAM	External Affairs Manager	Social	Done
34	Engagement with Abbott	External	1.Engagement with Abbott on AWS Knowledge Sharing	Brief them on Water initiatives and AWS and make them your stakeholder	1. Engagement with Stake Holder 2. Information Sharing	1.Safe Water, Sanitation and hygiene for All 2. Important Water Related Areas	AWS Team	AWS Lead EHS Manager	AWS TEAM	External Affairs Manager	Social	WIP
35	Engagement with Packages	External	1. Engagement with Supplier to understand their water usage and share knowledge on best practice to save water	1. Engagement with Supplier to understand their water usage in producing the WM Material. 2. Information on Water related best practices sharing	1. Engagement with Stake Holder 2. Information Sharing	1.Safe Water, Sanitation and hygiene for All 2. Important Water Related Areas	AWS Team	AWS Lead EHS Manager	AWS TEAM	External Affairs Manager	Social	WIP
36	Engagement with Saima Packages	External	1. Engagement with Supplier to understand their water usage and share knowledge on best practice to save water	1. Engagement with Supplier to understand their water usage in producing the WM Material. 2. Information on Water related best practices sharing	1. Engagement with Stake Holder 2. Information Sharing	1.Safe Water, Sanitation and hygiene for All 2. Important Water Related Areas	AWS Team	AWS Lead EHS Manager	AWS TEAM	External Affairs Manager	Social	WIP
37	Deep Compliance Audits to be Conducted in Water Related Areas	Internal	1. Health Check of Compliance against the policy in Water Areas 2. Identify Gaps and Take Actions 3. Drive improvement in water Related Areas	1. Plan Deep compliance audits in water related Areas	Identify Gaps and drive improvement in Water Related Areas	Sanitation and hygiene for All 2. Important Water Related Areas	EHS Manager	EHS Manager Engineering Site and Services Manager	HOD's	HOD's	Economic	On Going
38	AI Based Drip Irrigation System Pilot	External	1. Introduce Technology to drive more Efficiency in Irrigation Activities	Design and installation of programmed AL bases Drip Irrigation System	48% Water Saving	Important Water Related Areas(IWRA's)	Leaf Sustainability Manager	1. Leaf Sustainability Manager and External Affair	Head of Leaf	Head of Leaf	Water Saving	Done
39	Road Repair in Factory Vicinity	External	Construction of Road Shoulder in order to prevent underground Drain Damages	Engagement with Site Engineering Team on possibility of Road Shoulder construction	Protection of Drain Lines	1.Safe Water, Sanitation and hygiene for All	1. EHS Manager	EHS Manager ESSM	EHS Manager ESSM	Factory Manager ESSM	Reputational	Done
40	Process Water VSM to be Conducted	Internal	1. Detailed VSM of Process Water to be carried out to identify the losses and future opportunities	Team Formulation and Execution of VSM	Identification of Losses and Opportunities	Good Water Governance	Factory Utilities Manager	Facilities and Utilities Manager EHS Manager	Engineering Site and Services Manager	IWS Manager HOD's	Water Saving	Done

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41	WASH Trainings of All Employees	Internal	1. Trainings on Good Hygiene Practices of all the 3P Staff 2. Water Scarcity Awareness Content to be added for awareness	1. Training to be made part of OSALP Annual Training 2. Subject training to be added in EHS Induction Training	WASH and Water Challenges Awareness	1.Safe Water, Sanitation and hygiene for All 2. Important Water Related Areas	OSDC Manager	OSDC Manager EHS Manager	EHS Manager	HOD's	Social	On Going
42	Monitoring Total Water usage by Farmers during tobacco crop season	External	Monitoring of total water usage on tobacco crop by the farmers through different methods of irrigations	1. Engagement with Farmers to capture their water usage data on tobacco crop. 2. Analyzing per irrigation per hectare usage of water through different methods. 3. Use the analysis for feedback to farmers during cluster meetings	1. Engagement with Stake Holder 2. Information Sharing	Important Water Related Areas(IWRA's)	Leaf Sustainability Manager	Leaf Sustainability and external affairs manager	Head of Leaf Lex	LEX	Water Saving	On Going
43	Rain fall measurement on Site	Internal	Measurement of Rainfall in factory premises	1. Procurement and installation of Rainwater Measuring instrument	Water Governance	Sustainable Water Balance	EHS Manager	1. EHS Manager	ESSM	Factory Manager	Water Saving	WIP
44	Provision if Treated water for AHU Filter Cleaning	Internal	Replacement of fresh water usage with treated water	1. Installation of water Pump to transfer CVS Water to AHU Section	Fresh Water Saving	Important Water Related Areas(IWRA's)	Secondary Services Engineer	Factory Utilities Manager	Engineering Site and Services Manager	Engineering Site and Services Manager	Water Saving	Done
45	Replacement of Water Based Compressors with Air Based Compressor	Internal	Reduction of fresh water usage in CVS area	Procurement and installation of new Busch Compressors for CVS	2000 M3 Annual Fresh Water Savings	Important Water Related Areas(IWRA's)	Secondary Services Engineer	Engineering Site and Services Manager	Engineering Site and Services Manager	Factory Manager	Water Saving	Done
46	Condensate recovery network to be expanded and optimized in PMD and GLT	Internal	Increase water recovery and reduce dependency on fresh water abstraction	1. Assessment and installation of appropriate channels for condensate recovery in PMD and GLT	Water Savings	Important Water Related Areas(IWRA's)	Services Engineer	Engineering Site and Services Manager	EHSM	Factory Manager	Water Saving	WIP
47	ETP water to substitute freshwater in Boiler	Internal	Reduce the use of fresh water and utilize treated water in boiler	1. Feasibility of treated water usage in Boiler 2. Installation of appropriate infrastructure for water reuse in boiler	Water Savings	Important Water Related Areas(IWRA's)	Factory Utilities Manager	Engineering Site and Services Manager	EHSM	Factory Manager	Water Saving	Dropped
48	RO Reject Water usage in PMD Floor Cleaning	Internal	Reject Water to be utilized in cleaning activities	1. Installation of infrastructure for provision of RO Reject water to PMD	Water Savings	Important Water Related Areas(IWRA's)	Services Engineer	Engineering Site and Services Manager	EHSM	Factory Manager	Water Saving	Done
49	Phase 2 Above ground water pipelines and Factory	Internal	Water saving by eliminating hidden leakages	Projects to be initiated in order to shift underground lines above ground in order to save water from leakages	Water Savings	Important Water Related Areas(IWRA's)	Services Engineer	Engineering Site and Services Manager	EHSM	Factory Manager	Water Saving	Planned
50	Alternate Furrow Irrigation - Phase 1 (1750 Hectare)	External	Water Saving by adopting new irrigation practices	1. Training of farmers on Alternate Furrow Irrigation method 2. Introduction of alternate furrow irrigation for first 2 irrigations	Overall Water Saving of 2 % in Leaf Areas	Important Water Related Areas(IWRA's)	Leaf Sustainability and external affairs manager	Leaf Sustainability and external affairs manager	Leaf Team	Head of Leaf	Water Saving	Done
51	Alternate Furrow Irrigation - Phase 2 (3100 Hectare)	External	Water Saving by adopting new irrigation practices	1. Training of farmers on Alternate Furrow Irrigation method 2. Introduction of alternate furrow irrigation for first 2 irrigations	Overall Water Saving of 5 % in Leaf Areas	Important Water Related Areas(IWRA's)	Leaf Sustainability and external affairs manager	Leaf Sustainability and external affairs manager	Leaf Team	Head of Leaf	Water Saving	Planned
52	Laser Land Leveling	External	Water Saving by adopting new irrigation practices	1. Training of farmers on using Laser Land Leveling	Overall Water Saving of 2 % in Leaf Areas	Important Water Related Areas(IWRA's)	Leaf Sustainability and external affairs manager	Leaf Sustainability and external affairs manager	Leaf Team	Head of Leaf	Water Saving	On Going
53	AHU Closed loop HVAC (AHU) Recirculation	Internal	Reutilization of RO Reject Water	1. Recirculation mechanism was transformed to a closed loop one utilizing RO Rejected Water.	Water Savings	Important Water Related Areas(IWRA's)	Services Engineer	Engineering Site and Services Manager	EHSM	Factory Manager	Water Saving	Done
54	ETP Buffer Storage Tank	Internal	Reutilization of ETP treated Water	An additional buffer storage tank was installed of 18m3 in order to mitigate this issue and bring down treated water discharge to 2m3 per day.	Water Savings	Important Water Related Areas(IWRA's)	Services Engineer	Engineering Site and Services Manager	EHSM	Factory Manager	Water Saving	Done
55	Digital Enercon	Internal	Addition of digital flowmeter at extraction and storage end to check water loss	On Enercon dashboard daily tracking of water loss will be tracked	Water Savings	Sustainable Water Balance	Factory Utilities Manager	Engineering Site and Services Manager	EHSM	Factory Manager	Water Saving	On Going