



## Թափոնների քանակի և բաղադրության ուսումնասիրություն Waste Quantity and Composition Study

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### ABOUT THE PROJECT AND THE EVENTS

The American University of Armenia (AUA) Acopian Center for the Environment in partnership with the Government of Armenia has launched the Waste Quantity and Composition Study (WQCS) funded by the AUA Manoogian Simone Research Fund (MSRF). The Swedish and Armenian experts study quantity and composition of municipal solid waste, construction, and demolition waste, industrial waste, electrical and electronic waste, agricultural and horticultural waste, medical waste, automotive waste. For more details about the project visit [here](#).

The WASTE QUANTITY AND COMPOSITION STUDY project will include the following two public events:

#### **September 2 – HAZARDOUS WASTE MANAGEMENT IN ARMENIA (Focus Group Discussion)**

- Reports on hazardous waste management best practice by the Swedish experts
- Reports on hazardous waste management in Armenia by the experts from the key agencies
- Open discussions on issues and solutions on hazardous waste management in Armenia

#### **September 6 – SUSTAINABLE WASTE MANAGEMENT IN ARMENIA (Public Presentations and Discussions)**

- Reports on sustainable waste management best practice by the Swedish experts
- Reports on WASTE QUANTITY AND COMPOSITION STUDY tentative results by the Swedish experts
- Open discussions sustainable waste management and circular economy transition in Armenia

Both events will take place from **9 AM to 5.30 PM** at the American University of Armenia, Manoogian Hall (First floor, Paramaz Avedisian Building, 40 M. Baghramyan Ave.).

The agenda for both events is presented below.

To attend any of the events please register.

[Register](#)

## HAZARDOUS WASTE MANAGEMENT IN ARMENIA (Focus Group Discussion)

Septmeber 2, 2019

### AGENDA

Time	Section/Topic	Speaker/Leader
8.45 – 9.00	<b>REGISTRATION</b>	
9.00 – 9.15	<b>WELCOME WORDS</b>	AUA Acopian Center for the Environment and AUA Manoogian Simone Research Fund
9.15 – 10.00	<b>WHAT IS HAZARDOUS WASTE?</b> – Definitions and classification – Sources of HZW (industry, commercial areas, building/construction waste, household waste, clinics/hospitals, etc.)	Ingrid Håstad
10.00 – 10.45	<b>WHY IS HAZARDOUS WASTE A PROBLEM?</b> – Environmental and public health impacts on short and long term – Occupational health and safety – Dumping of HZW – Contamination of non-hazardous waste etc. – Q/A	Ingrid Håstad
10.45 – 11.00	<b>COFFEE BREAK</b>	
11.00 – 11.45	<b>INSTITUTIONAL &amp; REGULATORY FRAMEWORK</b> – Rules and regulations in Armenia – International bench-marking – Institutional setup, roles and responsibilities	Ingrid Håstad
11.45 – 12.30	<b>COLLECTION &amp; TREATMENT OF HAZARDOUS WASTE</b> – Examples of HZW types with special systems e.g. healthcare waste, e-waste, batteries, etc. – Examples of HZW management in other countries, problems and solutions – Q/A	Ingrid Håstad
12.30 – 13.30	<b>BREAK</b>	
13.30 – 15.00	<b>PRESENTATIONS BY KEY GOV'T AGENCIES ON THE STATUS OF HAZARDOUS WASTE MANAGEMENT IN ARMENIA</b> – Ministry of Health – Min of Environment – Min of Emergency Situations – Yerevan Municipality – Q/A	Representatives from key agencies
15.00 – 15.15	<b>COFFEE BREAK</b>	
15.15 – 17.00	<b>PUBLIC DISCUSSION ON GAPS AND SOLUTIONS/OPPORTUNITIES IN ARMENIA</b>	Ingrid Håstad Karin Eberle
17.00	<b>CLOSING REMARKS</b>	

SUSTAINABLE WASTE MANAGEMENT IN ARMENIA (Public Presentations and Discussions)  
September 6, 2019

AGENDA

Time	Section/Topic	Speaker/Leader
8.45 – 9.00	<b>REGISTRATION</b>	
9.00 – 9.45	<b>WELCOME &amp; INTRODUCTION</b> – About “Waste Quantity and Composition Study” Project – Reporting on the “Waste Governance in Armenia” and other studies related to sustainable waste management	Alen Amirkhanian Narine Avetyan Harutyun Alpetyan
9.45 – 10.45	<b>WASTE QUANTITY AND COMPOSITION STUDY</b> – Introduction of the project in an international context – Project scope and objectives – Project expert team – Project methodology	Karin Eberle Anders Lärkert Ingrid Håstad
10.45 – 11.00	<b>COFFEE BREAK</b>	
11.00 – 12.00	<b>WASTE QUANTITY AND COMPOSITION STUDY</b> – Presentation on the data collection process – Presentation on the study preliminary results – Q/A	Karin Eberle Anders Lärkert
12.00 – 13.00	<b>BREAK</b>	
13.00 – 15.00	<b>SUSTAINABLE WASTE MANAGEMENT</b> – Challenges and solutions – International examples, lessons learned – Feasibility of Application of Pyrolysis and Plasma Gasification Technologies in Armenia – Observations and recommendations in the Armenian context – Discussion	Karin Eberle Anders Lärkert Ingrid Håstad Natella Mirzoyan
15.00 – 15.30	<b>COFFEE BREAK</b>	
15.30 – 17.00	<b>WASTE MANAGEMENT IN CIRCULAR ECONOMY</b> – Integrated solutions – Sustainable urban development – urban/rural linkages – Circular Economy – Armenia towards Circular Economy – Discussion	Karin Eberle Harutyun Alpetyan
17.00	<b>CLOSING REMARKS</b>	Alen Amirkhanian Harutyun Alpetyan

## ABOUT THE EXPERTS

### **Ms. Karin Eberle, Bollagen, Sweden**

Ms. Karin Eberle, M Sc Chemical Engineering, has over 20 years of international experience in waste management, having worked as a consultant with municipal and private companies but also at the Asian Development Bank in project preparation. Today, apart from being an international consultant, she is the sustainability manager of LL Group, which offers a waste management and entrepreneurial services in Stockholm. Ms. Eberle has worked with all aspects of SWM from source-segregation to treatment, e.g. setting up biogas plants in rural Georgia, and final disposal, e.g. detailed engineering of sanitary landfills. She is a board member of the Swedish Recycling Industries' Association and chairman at the Swedish Association for Road Transport Companies' Advisory Board for Environmental Services, which are active in policy and regulations review as well as circular economy, fossil-free solutions, new SWM technology, etc. She has regional experience from Armenia, in training programs on SWM to Armenian experts (2003-06) and in the procurement of services for waste collection and sanitary cleaning in Yerevan (2011-12). In this project, she is the team leader and responsible for recommendations for a sustainable, strategic SWM system.

### **Mr. Anders Lärkert, Bollagen, Sweden**

Mr. Anders Lärkert, M Sc Civil Engineering, has 35 years of international experience in waste management. Before becoming an international consultant, Mr. Lärkert was the CEO of a private waste company (later Suez Sweden) Sweden. Thus, he is well acquainted with both daily operation on waste collection and treatment as well as the business aspects and PPP on sustainable waste management. Mr. Lärkert has strong regional experience from particularly Russia (investigating Investment alternatives of SWM projects in the Komi Republic) and Uzbekistan (SWM Master Plan) but also Azerbaijan on the training of a local waste company and Armenia in the international bid for waste collection operators. He is particularly experienced in waste logistics and is in charge of data collection and the Waste Composition Analysis in this project.

### **Ms. Ingrid Håstad, Bollagen, Sweden**

Ms. Ingrid Håstad, M Sc Environmental studies, has over 30 years of international experience in the environmental regulatory framework and waste management. She is a specialist on hazardous waste, healthcare waste and WEEE (electric and electronic waste) related to EU regulations. Before becoming a consultant, Ms. Håstad worked at the Swedish Environmental Protection Agency and with environmental health and protection issues at local environmental health boards. She is also engaged in emergency response/disaster assessment by e.g. Swedish Civil Contingencies Agency. She has recent experience from Russia, working with Mr. Lärkert in Komi on investment alternatives but also Kazakhstan (SWM Action Plan) and Georgia (SWM Emergency Action Plan). In this project, she is responsible for data collection and capacity development concerning healthcare waste and other hazardous waste plus e-waste (WEEE).

### **Mr. Alen Amirkhanian, AUA Acopian Center for the Environment**

Alen Amirkhanian is the Director of the American University of Armenia's (AUA) Acopian Center for the Environment, a position he has held since 2013. In 2014, he established AUA Center for Responsible Mining and is acting as its Interim Director. He teaches graduate and undergraduate environmental courses at AUA. Prior to AUA, he was Senior Vice President of Research at Michael Porter's Initiative for a Competitive Inner City. He has consulted with the World Bank, UNDP, and the Brookings Institution on energy efficiency as well as economic and urban-growth issues. His current academic interests include urban environmental sustainability, "greening" the built environment, and circular economy esp. as it relates to "greening" cities. Alen holds a Masters in City Planning ('97) from the Massachusetts Institute of Technology's Department of Urban Studies and Planning.

### **Mr. Harutyun Alpetyan, AUA Acopian Center for the Environment**

Harutyun Alpetyan, an alumnus of the AUA Master's program in Industrial Engineering and Systems Management, has been appointed as a lead expert for Waste Governance in Armenia, an 11-month project that started in November 2018. The project is funded by the Swedish Ministry of Foreign Affairs under its Swedish-Armenian SDG Expert Exchange Programme. The project is being implemented in partnership with the Government of Armenia and Swedish partners Life Foundation and Miljo & Avfallsbyran. Harutyun has worked in the field of industrial automation and integration as a product design development manager. As part of his academic work, he's focused on energy management as well as analyzed Yerevan's waste-collection system. He also co-teaches courses at AUA on topics such as solid and hazardous waste and developing and implementing environmental projects.

## ABOUT THE AUA ACOPIAN CENTER FOR THE ENVIRONMENT

The AUA Acopian Center for the Environment, a research center of the American University of Armenia, promotes the protection and restoration of the natural environment through research, education, and community outreach. The AUA Acopian Center's focus areas include sustainable natural resource management, biodiversity and conservation, greening the built environment, clean energy, and energy efficiency, as well as information technology and the environment.