14th International HCH and Pesticides Forum 2023, Zaragoza

How the European Union is managing the Legacy of Lindane and HCH waste.
What are the "Lessons learned" and what is the "Way forward"

21-24 Februrary, Zaragoza SPAIN

PROGRAMME

English ⇄ Spanish

Caja Rural de Aragón (Coso, 29, 50003), and **STREAMING**

SPONSORS:

SUPPORTERS:

ORGANIZATION:

		TUESDAY, 21 FEBRUARY 2023
08:30	Registration of participants **(HALL-GROUND FLOOR)**	
ROOM 1: AUDITORIUM		**TUESDAY, 21 FEBRUARY 2023**
09:15	Institutional group photo	
09:30 10:30	**WELCOME, OPENING CEREMONY** - Mr. Carlos Gamarra - Managing Director Climate Change and Environmental Education (Government of Aragon) - Mrs. Isabel García Muñoz (Video) -Member of European Parliament (Aragon, Spain) - Mrs. Sagrario Pérez (Video) -General Directorate of Environmental Quality, Sustainability and Climate Change (Xunta Galicia) - Mrs. Karolin Braunsberger-Reinhold (Video) Member of European Parliament (Saxony-Anhalt, Germany) - Mrs. Maria Victoria Esteruelas - Aragonese Society of Agri-Environmental Management (SARGA) - Mr. John Vijgen -International Association of HCH and Pesticides (IHPA)	
10:30 11:30 10:30 10:45 11:00 11:15	**Session 1: Life SURFING Part 1 (Block 1)** *Chairs: Elena Cano & Jorge Net (15min /speaker)* 1. Net J., Cano, E., Fernández, J., Velilla, S.M. LIFE SURFING: SURFactant enhanced chemical oxidation for remediatING DNAPL 2. Sánchez-Valverde A., Romero P., Peiro A., Arjol M.A., Herranz C., Cano, E., Fernández J. LIFE SURFING: FACILITIES, EQUIPMENT, CONSUMABLES, AND RESOURCES IN THE TEST EXECUTION 3. Fernández, J. Santos, A., Herranz, C. Cano, E. Lorenzo, D., Arjol, M.A. LIFE SURFING PROJECT, PREPARATORY WORKS FOR THE INJECTION OF SURFACTANTS AND OXIDANTS 4. Fernández, J. Santos, A., Herranz, C. Net, J. Lorenzo, D., Arjol, M.A. LIFE SURFING PROJECT, ENHANCED SURFACTANTS EXTRACTION (SEAR) IN A FRACTURED AQUIFER.	
11:30 12:00	COFFEE BREAK **(HALL ROOM -1ST FLOOR)** SPONSORED BY:	
12:00 13:30 12:00 12:15 12:30 12:45 13:00 13:10	**Session 2: Life SURFING Part 2 (Block 1)** *Chairs: Elena Cano & Jorge Net (15min /speaker)* 5. Fernández, J. Santos, A., Herranz, C. Net, J., Saez P., Arjol, M.A., Lorenzo, D. LIFE SURFING PROJECT, IN SITU CHEMICAL OXIDATION ENHANCED WITH SURFACTANTS (SISCO) IN A FRACTURED AQUIFER 6. Sanchez-Yepes, A. Santos, A., Fernández, J. Herranz, C. Cano, E. Lorenzo, D. LIFE SURFING PROJECT: CONTAMINATED EMULSION TREATMENT by ADSORPTION in GAC and ADSORBENT REGENERATION. 7. Herranz, C, Fernández, J. Santos, A., Salvatierra, A., Cano, E. Lorenzo, D., Arjol, M.A. ON SITE REMEDIATION OF FLUIDS EXTRACTED IN SEAR TREATMENT IN THE LIFE SURFING PROJECT AT BAIIÍN – SABIÑÁNIGO (HUESCA): SELECTIVE POLLUTANTS OXIDATION AND ADSORPTION. 8. Herranz, C., Arjol, M. A., Fernández, J., Santos, A. ON SITE ALKALINE HYDROLISIS OF FLUIDS EXTRACTED IN SEAR TREATMENT IN THE LIFE SURFING PROJECT AT BAILIN – SABIÑÁNIGO (HUESCA) 9. Fabian Simón. **Video LIFE SURFING** Discussion	
13:30 15:00	WELCOME LUNCH (**HALL ROOM -1ST FLOOR)** sponsored by:	

ROOM 1: AUDITORIUM (1st floor) TUESDAY, 21 FEBRUARY 2023		ROOM 2 (3rd floor) TUESDAY, 21 FEBRUARY 2023		ROOM 3 (ground floor) TUESDAY, 21 FEBRUARY 2023	
15:00 18:00	**Session 3: STRATEGY-INFRASTRUCTURE-MONITORING SABINANIGO MEGA-SITE SESSION. (Block 2)** *Chairs: Jesús Fernández & Sonia Velilla (12min /speaker)*	15:00 17:30	**Session 1: WASTE AND SOIL TECHNOLOGIES. WASTE MANAGEMENT EXPERIENCES, DESTRUCTION TECHNOLOGIES (Block 3)** *Chairs: Nick Morgan & Ion Barbarasa (13min /speaker)*	15:00 17:30	**Session 1: DEALING WITH CHLOR ALKALI AND MERCURY: SYNERGY BETWEEN MINAMATA AND STOCKHOLM CONVENTION: PRACTICAL CASES (Block 4)** *Chairs: Ben Vauter (ONLINE) & Guido Van de Coterlet (15min /speaker)*
15:00	1. Cano, E., Fernández, J., Net, J., Velilla, S.M., L. Monge, Arjol, M.A. CASE STUDY OF THE INFLUENCE OF GEOLOGY AND THE PRESENCE OF DIFFERENT MATRICES ON THE APPLICABILITY OF HCH REMEDIATION TECHNOLOGIES.	15:00	1. Grégoire Hamon, Antoine Cunin. TREATMENT AND RECOVERY OF HAZARDOUS WASTE MANAGEMENT	15:00	1. Ben Vauter (ONLINE). CHLOR ALKALI INDUSTRY, GLOBAL MERCURY PARTNERSHIP AND THE MINAMATA CONVENTION ON MERCURY.
15:12	2. Velilla, S.M., Cano. E., Monge, L., Visanzay, A. UNIQUE STRATEGIC PROJECTS IN THE SITES AFFECTED BY HCH IN ARAGON.	15:13	2. John Follin, General Atomic. (ONLINE) COMMERCIAL ORGANIC CHEMICAL WASTE DESTRUCTION USING SUPERCRITICAL WATER OXIDATION.	15:15	2. Roland Weber. RELEVANCE OF MERCURY CONTAMINATED SITES FOR GLOBAL MERCURY RELEASE AND IMPLEMENTATION SYNERGY OF THE MINAMATA & STOCKHOLM CONVENTION.
15:24	3. Guadaño J., Gómez J., Granados E., Fernández J. MULTIDISCIPLINARY PERSPECTIVE OF THE ENVIRONMENTAL MANAGEMENT OF THE SARDAS SITE.	15:26	3. Eriksen, Søren; Ploug, Niels; Nielsen, Steffen Griepke. CAN LOW TEMPERATURE THERMAL DESORPTION BE CONVERTED TO DESTRUCTION AND BE MORE SUSTAINABLE THAN TRADITIONAL INCINERATION"	15:30	3. Nikola Jelinek. MERCURY CONTAMINATION AS A LEGACY OF CHEMICAL PRODUCTION IN THE CEE REGION.
15:36	4.1. Monge, L. Velilla, S.M., Cano, E., Fernández, J., Net, J. PURIFICATION, ANALYSIS AND LABORATORY MANAGEMENT SERVICE, TECHNICAL ASSISTANCE TO THE FACULTY MANAGEMENT AND MONITORING FOR SPACES AFFECTED BY HCH CONTAMINATION.	15:39	4. Douglas Hallett (ONLINE). HYDROGEN REDUCTION OF HCH, PCBS, AND PLASTIC.	15:45	4. Guido Van de Coterlet. WHERE STOCKHOLM MEETS MINAMATA – MERCURY AND HCH ISSUES AS CHLOR-ALKALI FACILITIES.
	4.2. Ruiz, A; Arjol, M.A.; L. Monge; Gonzalvo. P; Velilla, S.M., Cano, E., Fernández, J., Net, J. ENVIRONMENTAL MONITORING IN THE SURROUNDINGS OF THE SPACES AFFECTED BY THE RESIDUE FROM THE MANUFACTURE OF THE HEXACHLOROCYCLOHEXANE PESTICIDE IN THE TOWN OF SABIÑANIGO.	15:52	5. Zheng Peng (VIDEO). PROGRESS IN ENVIRONMENTALLY SOUND MANAGEMENT AND DISPOSAL OF PESTICIDE POPS WASTES IN CHINA.	15:52	5. Xavier Ibarz. ECON INDUSTRIES: VACUDRY® TECHNOLOGY, CASE STUDY: MERCURY AND HCH WASTE TREATMENT FROM CHLOR-ALKALI PLANTS.
	4.3. Arjol, M.A.; L. Monge; Cano, E., Velilla, S.M., Fernández, J., Net, J. AIR QUALITY MEASUREMENT TASKS IN RELATION TO THE DECONTAMINATION WORKS OF MANUFACTURING WASTE OF THE HEXACHLOROCYCLOHEXANE PESTICIDE IN THE TOWN OF SABIÑÁNIGO.	16:05	6. Montse Papiol. HIGH TEMPERATURE INCINERATION OF POPs AND HAZARDOUS WASTE IS THE PROPER TREATMENT TO DESTROY THEM.	16:00	6. Castellnou A. BATREC: TREATMENT OF MERCURY AND MERCURY WASTES: MERCURY STABILIZATION AND SAFE DISPOSAL.
	4.4. Gonzalvo, P., Ruiz, A., Monge, L., Velilla, S.M., Cano, E., Fernández, J., Net, J. LABORATORY HCH SABIÑÁNIGO-REFERENCE CENTER IN RESEARCH ON PERSISTENT ORGANIC COMPOUNDS.	16:18	7. Saso Martinov. DDT DISPOSAL IN BANGLADESH.	16:15	7. Castellnou A. BATREC: HG DECONTAMINATION: CASE STUDIES IN SPAIN AND ABROAD, INCLUDING MERCURY BASED CHLOR-ALKALI PLANT DECOMMISSIONING.
	4.5. Ayala, C., L. Monge., Cano, E., Velilla, S.M., Fernández, J., Net, J. INTEGRAL MANAGEMENT OF THE PREVENTION OCCUPATIONAL RISKS IN THE EXPLOITATION, EXECUTION OF WORKS AND SPECIAL ACTIONS, INVESTIGATION, AND REMEDIATION OF SOILS AND/OR SITES CONTAMINATED BY HCH.	16:31	8. Valentin Plesca, Larisa Cupcea, Ion Barbarasa. OBSOLETE PESTICIDES MANAGEMENT AND DESTRUCTION IN MOLDOVA.	16:30	8. Boudewijn Fokke. ASGM (ARTISANAL AND SMALL-SCALE GOLD MINING) PROJECT INDONESIA
16:21	5. Navarro, I., de la Torre, A., Arjol, M. A., Fernández, J., Martínez, M. A. PERSISTENT PESTICIDES IN AIR FROM A FORMER HCH PRODUCTION SITE IN SPAIN.	16:44	9. Plesca, V., Barbarasa, I., Cupcea, L., Kubricht, J., Polak, M. MANAGEMENT OF POPs CONTAMINATED SITES IN MOLDOVA: CISMICHIOI LANDFILL.	16:45	9. Conde Ana I. Carrasco, F.Javier. REMEDIATION OF MERCURY CONTAMINATED SITE. THE CASE OF ALMADEN DUMP AND THE ANTIQUE MERCURY METALLURGY FACILITIES OF ALMADENEJOS CERCO.
16:33	6. Muñoz-Arnanz, J., Colomer-Vidal, P., Ros, M., Vicente, A., Salcedo, C., Bartalini, A., Jiménez, B. ATMOSPHERIC HCH CONCENTRATIONS (2008-2019) FROM THE SPANISH MONITORING PROGAM ON POPs.	16:57	10. Lud D., Schwemm D., Babaev E., Kalandadze B., Simon M.P., Weller P., Düring R-A. PESTICIDE INFORMATION SOURCES AND WASTE MANAGEMENT – SURVEY RESULTS FROM AZERBAIJAN COMPARED TO GEORGIA.	17:00	
16:45	7. Samper J., Sobral B., Montenegro L., Guadaño J., Gómez J., Delgado F., San Román J., Fernández J. 2D MODEL OF GROUNDWATER FLOW AND DISSOLVED HCH TRANSPORT THROUGH THE GÁLLEGO RIVER ALLUVIAL AQUIFER DOWNSTREAM THE SARDAS HCH LANDFILL (HUESCA, SPAIN).	17:10	Discussion	17:15	10. Ben Vauter (ONLINE). Conclusion.
16:57	8. J Gómez, J Guadaño, Samper J., Sobral B., Suso J., Fernández J. TRACER TESTS IN THE HCH-AFFECTED ALLUVIAL AQUIFER DOWNSTREAM THE SARDAS LANDFILL (HUESCA, SPAIN).			17:25	Discussion

ROOM 1: AUDITORIUM (1st floor)	TUESDAY, 21 FEBRUARY 2023	ROOM 2 (3rd floor)	TUESDAY, 21 FEBRUARY 2023	ROOM 3 (ground floor)	TUESDAY, 21 FEBRUARY 2023
17:09 17:21 17:33 17:45	9. Samper J., Sobral B., Pisani B., Montenegro L., Guadaño J., Gómez J., Fernández J. 3D GROUNDWATER FLOW AND CONTAMINANT TRANSPORT MODEL OF THE SARDAS LANDFILL (HUESCA, SPAIN). 10. Rodríguez-Arévalo, J., Castaño, S., Martín-Ruiz, M., Rodríguez-Abad, R., Asanza, E., Delgado, F., San Román, J. DIAGNOSIS OF LINDANE CONTAMINATION OF THE SARDAS LANDFILL (SABIÑÁNIGO) IN THE GÁLLEGO RIVER AND PROPOSAL FOR ACTION 11. Alonso T., Alcalde D., Escobar-Arnanz J., Encinas R., Fernández J. MASS DISCHARGE TEMPORAL EVALUATION IN A TRANSECT LOCATED IN THE DISCHARGE ZONE TO THE GALLEGO RIVER IN BAILIN LANDFILL, SABIÑANIGO (HUESCA). Discussion.				
17:00 19:00	TOURISTIC POINT INFORMATION (**HALL-GROUND FLOOR**)				
17:30 19:00	COFFEE BREAK (**HALL ROOM -1ST FLOOR**) SPONSORED BY:				
19:00	CITY SIGHTSEEING (**HALL -GROUND FLOOR**): TOUR SPONSORED BY:				
20:30	DINNER IN **TRES MARES RESTAURANT** P. º de Echegaray y Caballero, 82, 50003 Zaragoza (https://goo.gl/maps/4FZygZvc59D1pdh38) SONSORED BY:				

WEDNESDAY, 22 FEBRUARY 2023

ROOM 1: AUDITORIUM (1st floor)		ROOM 2 (3rd floor)		ROOM 3 (ground floor)	
09:00 11:30	**Session 1: BIOREMEDIATION. PART 1 (Block 5)** *Chairs: Alan Seech & Cosimo Masini (15 min /speaker)*	09:00 11:30	**Session 1: LIFEPOPWAT SESSION (Block 7)** *Chairs: Miroslav Černík & Jan Němeček (15 min /speaker)*	09:00 11:30	**Session 1: LIFECYCLE MANAGEMENT OF PESTICIDES AND DISPOSAL IN CENTRAL ASIA COUNTRIES AND TÜRKIYE SESSION. PART 1 (Block 10)** *Chairs: Stephan Robinson & Mark Davis (15min /speaker)*
09:00 09:15 09:30 09:45 10:00 10:15 10:30 10:45 11:00	1. Danny de Graaff, Tobias Praamstra, Cosimo Masini. MICROBIOME BASED REMEDIATION AND OTHER NATURE BASED TECHNIQUES 2. Cosimo Masini, Frederica Broglioli. INTEGRATED SUSTAINABLE APPROACH TO LINDANE. 3. Aguilar Bel, D., García Valero, A. DEGRADATION OF LINDANE BY BIOLOGICAL TECHNOLOGY. 4. Jesica Soder, David Fernández, Daniel Salom, Ernest Marco, Teresa Vicent, Paqui Blánquez, Salom, D., Fernández-Verdejo, D., Soder-Walz, J.M., Vicent, T., Marco-Urrea, E., Blánquez, P. LAB STUDIES LEADING TO DECISION-MAKING FOR IN SITU BIOREMEDIATION OF ORGANOHALIDES. 5. Kuntze, K. (ONLINE), Richnow, H., Fischer, A. SOURCE ALLOCATION AND DEGRADATION EVALUATION OF HCHs WITHIN A CONTAMINATED AQUIFER USING COMPOUND-SPECIFIC STABLE CARBON ISOTOPE ANALYSIS (CSIA). 6. Escobar-Arnanz J., Berganza J., Brettes P., Encinas R., Alonso T., Alcalde D., Fernández J. ANALYSIS OF MICROBIAL COMMUNITIES FOR THE IDENTIFICATION OF INOCULANTS FOR AN IN-SITU BIOREACTOR FOR TREATING HCH CONTAMINATION IN GROUNDWATER. 7. Granados, E., Herranz, C., Salvatierra, A., Guadaño, J., Fernández, J. CHARACTERIZATION OF NATURALLY PRESENT MICROBIAL POPULATION AT SARDAS' LANDFILL AND INQUINOSA FACTORY IN SABIÑANIGO, HUESCA. 8. Escobar-Arnanz J., Encinas R., Alonso T., Alcalde D., Fernández J. APPLICATION OF MOLECULAR BIOLOGICAL TOOLS AND ISOTOPIC ANALYSIS FOR BIOGEOCHEMICAL CHARACTERIZATION OF FRACTURED BEDROCK AQUIFER IMPACTED BY DNAPL. Discussion.	09:00 09:10 09:25 09:40 09:55 10:10 10:25 10:40 10:55 11:10 11:15	1. FINAL: 3minute Video LIFEPOPWAT Hajek plant state of the art Hajek, January 2023. 2. M.Černík, P. Hrabak, P. Brucek. WETLAND+® TECHNOLOGY: TREATMENT OF HCH CONTAMINATED WATER BY A PASSIVE BIOLOGICALLY BASED REMEDIATION SYSTEM. 3. Kończak,B., Gzyl, G. , Moycho-Jędros, J., Kvapil, P., Ptackova, H. , Wasiński, P. , Łabaj, P. , Antos, V. Cernik, M . Adamczyk, M., Skalny, A., Wiesner-Sękala, M., Ratajski, P. ADAPTATION OF METHODOLOGICAL ASSUMPTIONS FOR DESIGN OF PILOT SCALE WETLAND+ INSTALLATION FOR WATER TREATMENT FROM HCH TAKING INTO ACCOUNT PRACTICAL LESSONS FROM DIFFICULT FIELD CONSTRUCTION PROCESS IN JAWORZNO, POLAND (LIFEPOPWAT PROJECT). 4. Němeček, J., Brůček, P., Hrabák, P., Černík, M. EXPERIENCE FROM OPERATION AND TUNNING OF WETLAND+®. TECHNOLOGY FOR TREATMENT OF HCH-CONTAMINATED WATER. 5. Štrojsová, M., Balej, T. Hrabák, P., Černík, M. BENTHIC DIATOMS AS INDICATOR OF ENVIRONMENTAL IMPACT OF WETLAND+® TECHNOLOGY FOR TREATMENT OF HCH-CONTAMINATED WATER. 6. C. A. Arias. BENEFITS OF THE PRESENCE OF PLANTS IN WETLAND+ SYSTEM TREATING HCH POLLUTED SITES. 7. Stanislava Vrchovecká, Tereza Sázavská, Klára Lísková, Pavel Hrabák. GROUNDWATER HCH INDICATION VIA PHYTOSCREENING OF TREES. 8. P. Svermova, J. Buresova, P. Bardos, and M. Černík. ASSESSMENT OF SOCIO-ECONOMIC IMPACT FOR WETLAND+®. 9. Antoine Joubert, Petr Kvapil. PROTOCOLS OFFER TO THE CLIENTS FOR WETLAND+® REPLICATION. 10. FINAL: 3minute Video LIFEPOPWAT Hajek plant state of the art Hajek, January 2023. Discussion.	09:00 09:15 09:30 09:45 10:00 10:15 10:30 10:45	**Introduction Central Asia Session** 1. Tania Santivanez (ONLINE). Welcome and introduction to the session 2. Mark Davis. ARE PESTICIDES OBSOLETE? **Panel Discussion (moderator: Stephan Robinson)** 3. Javidan Guliyev (AZE), **Mansur Oshurbayev** (KAZ) (ONLINE), Tinatin Doolotkeldieva (KGZ), Umedjon Ulughov (TJK) (ONLINE). OVERALL CHALLENGES IN THE REGION ON OBSOLETE PESTICIDES AND PESTICIDE LIFE-CYCLE MANAGEMENT. **Results of the FAO Central Asia POPs project** 4. Tania Santivanez (ONLINE). OVERVIEW OF FAO WORK ON IMPROVING PESTICIDE LIFE-CYCLE MANAGEMENT FOCUS ON CENTRAL ASIA AND TÜRKIYE. 5. Tinatin Doolotkeldieva. IN SITU IMPLEMENTATION OF TRIALS ON MICROBIOLOGICAL REMEDIATION OF POPS CONTAMINATED SOILS IN KYRGYZSTAN (SUBM). 6. Assil Nurzhanova. PHYTOREMEDIATION OF POPS-CONTAMINATED SOILS: SOLUTIONS AND DEVELOPMENT PROSPECTS IN KAZAKHSTAN. 7. Umedjon Ulughov. (ONLINE) AWARENESS RAISING WORK IN MINI-LANDFILL AREAS IN TAJIKISTAN + PLANNING OF REMEDIATION OF VILLAGE #1 MINI-LANDFILL. Q&A
11:30 12:00	COFFEE BREAK SPONSORED BY **(HALL ROOM -1ST FLOOR)**: emgrisa				
12:00 14:00 12:00	**Session 2: BIOREMEDIATION. PART 2 (Block 5)** *Chairs: Alan Seech & Cosimo Masini (15min /speaker)* 9. Eduardo Beltrán-Flores, Martí Pla-Ferriol, Maira Martínez-Alonso, Núria Gaju, Montserrat Sarrà, Paqui Blánquez. PRELIMINARY STUDIES TO IMPLEMENT A PILOT REACTOR FOR THE BIOLOGICAL REMOVAL OF PESTICIDES FROM AGRICULTURAL WASHING WASTEWATER.	12:00 14:00 12:00 12:15 12:30 12:45	**Session 2: HCH IN EU SESSION (Block 8)** *Chairs: Javier Sancho & Boudewijn Fokke (15min /speaker)* 1. Boudewijn Fokke. INTRODUCTION HCH IN EU PROJECT. 2. Katja Amstaetter. INVENTORY RESULTS FOR GERMANY. 3. Guido van de Cotelet. THE GEOGRAPHIC INFORMATION MODEL. 4. Javier Sancho. ROAD MAP TO SUSTAINABLY MANAGE HCH CONTAMINATED SITES.	12:00 14:00 12:00 12:15	**Session 2: LIFECYCLE MANAGEMENT OF PESTICIDES AND DISPOSAL IN CENTRAL ASIA COUNTRIES AND TÜRKIYE SESSION. PART 2 (Block 10)** *Chairs: Stephan Robinson & Mark Davis (15min /speaker)* 8. Alexander Efimkin (ONLINE). EMPTY PESTICIDES CONTAINER MANAGEMENT. 9. Alejandra Loayza (ONLINE), HIGHLY HAZARDOUS PESTICIDES ASSESSMENT

WEDNESDAY, 22 FEBRUARY 2023

ROOM 1: AUDITORIUM (1st floor)		ROOM 2 (3rd floor)		ROOM 3 (ground floor)	
12:15	10. Escobar-Arnanz J., Berganza J., Brettes P., Encinas R., Alonso T., Alcalde D., Fernández J. DESIGN, DEVELOPMENT AND SCALE-UP OF AN AEROBIC IN-SITU BIOREACTOR FOR REMOVAL OF HCH IN GROUNDWATER.	13:00	5. Boudewijn Fokke. GUIDELINES SC POP CONTAMINATED SITE MANAGEMENT.	12:30	10. Zsuzsanna Keresztes (ONLINE). REDUCTION OF PESTICIDES USE.
12:30	11. Doolotkeldieva, T. D., Konurbaeva, M. U. APPLICATION OF THE METHOD OF PHYTOREMEDIATION OF PESTICIDE CONTAMINATED SOILS IN A FIELD EXPERIMENTAL PLOT IN CHIM-KORGON VILLAGE	13:15	6. John Vijgen. EU WIDE STRATEGY TO MANAGE HCH CONTAMINATED SITES.		**Creation of a Central Asia Working Group on contaminated soil remediation and management**
12:45	12. González J, Mancho C, Gil-Díaz M, García-Gonzalo P, Lobo M.C. ASSISTED-BIOREMEDIATION FOR THE DEGRADATION OF ORGANOCHLORINE COMPOUNDS.	13:30	7. John Vijgen. STATUS OF THE IMPLEMENTATION OF THE EU WIDE STRATEGY.	12:45	Conclusions and findings of the session (chairmen), wrap-up.
13:00	13. Alan Seech, Michael Mueller. ENHANCED BIOREMEDIATION OF SOIL CONTAMINATED WITH LINDANE AND OTHER CHLORINATED PESTICIDES USING ZVI/ORGANIC CARBON REAGENTS.	13:45	Discussion.		
13:15	14. Santos, A., Checa-Fernández, A., Domínguez, C.M., Martín-Sanz, J.P., Valverde-Asenjo, I., Quintana-Nieto, J.R., Fernández-Sanjulián, J., Chicaiza-Guerra, K.Y. PRELIMINARY STUDY OF THE BIOREMEDIATION CAPACITY OF HORSE AMENDMENT IN SOILS CONTAMINATED WITH HCHS.				
13:30	Discussion.				
14:00 15:00	LUNCH SPONSORED BY **(HALL ROOM -1ST FLOOR):**				
15:00 18:00	**Session 3: WASTE AND SOIL TECHNOLOGIES. In-Situ remediation technologies (Block 6)** *Chairs: Aurora Santos & Jesús Fernández (15min /speaker)*	15:00 17:30	**Session 3: HCH CASES - LINDANE NETWORK AND OTHERS (Block 9)** *Chairs: Elena Cano & Angels Castellnou (15min /speaker)*	15:00 18:00	**Session 3: TOXICOLOGY: NEW APPROACHES TO TESTING OF CHEMICALS BASED ON OMICS AND EPIDEMIOLOGY: EXAMPLE DEVELOPMENTAL NEUROTOXICITY (Block 11)** *Chairs: Walter Lichtensteiger & Margret Schlumpf (15-20min /speaker)*
15:00	1. Jeroen Vandenbruwane and Lionel Counet. SPIN® INJECTION TECHNOLOGY OR HOW TO PERFORM QUALITY INJECTIONS FOR AN OPTIMAL RESULT, EVEN IN LOW PERMEABILITY OR HETEROGENEOUS SOILS. EXPLANATIONS THROUGH THE CASE OF LINDANE.	15:00	1. Cano, E., Sánchez, A., Camiño, J.M., Hanzal, Z., Trump, M., Gzyl, G., Neri, B. LINDANET: EUROPEAN NETWORK OF LINDANE WASTE AFFECTED REGIONS WORKING TOGETHER TOWARDS A GREENER ENVIRONMENT.		**First part: Exposure of wildlife and humans to chemicals**
15:15	2. Julien Maire, Antoine Joubert, Iheb Bouzid, Nicolas Fatin-Rouge, Fabien Laurent and Mathias Broquaire. INNOVATIVE HCH IN-SITU REMEDIATION USING POLYMER GEL AS A REAGENT CARRIER – RESULTS AT FIELD SCALE.	15:15	2. Joao PM Torres, Yago de Souza, John Vijgen. HCH IN BRAZIL-SOCIALIZING CHEMICAL RISKS AND OTHERS.	15:00	1. John Vijgen. DEVELOPMENT OF APPROACHES TO REMOVE TOXIC SUBSTANCES FROM THE ENVIRONMENT.
15:30	3. Marcello Carboni and Jack Shore. INSTALLATION, COMMISSIONING AND OPERATION OF AN INJECTABLE IN SITU PERMEABLE REACTIVE BARRIER TO PREVENT THE ADVECTION OF PER-AND POLYFLUOROALKYL SUBSTANCES AT A EUROPEAN AIRPORT.	15:30	3. Chaos, Z., Celeiro, M., García-Jares, C., Monterroso, C. SPATIAL DISTRIBUTION OF HEXACHLOROCYCLOHEXANE ISOMERS IN OAK LEAVES AND TOPSOIL FROM O PORRIÑO (NW SPAIN).	15:13	2. Pedro Cardoso. GLOBAL EFFECTS OF POLLUTANTS AND OTHER RISK FACTORS ON INVERTEBRATE FAUNA.
15:45	4. Escobar-Arnanz J., Encinas R., Alonso T., Alcalde D., Fernández J. DESIGN, OPERATIONAL AND PROCEDURES FOR THE APPLICATION OF IN SITU CHEMICAL OXIDATION TREATMENTS IN FRACTURED BEDROCK AQUIFER IMPACTED BY AN OLD DNAPL.	15:45	4. Revuelto Palau, D., Fernández Cascán, J., Corujo Cristobal, J.M., Sainz Gutiérrez, R. CHARACTERIZATION AND MANAGEMENT OF LINDANE-CONTAINING WASTE AT AN ABANDONED LINDANE PRODUCTION FACILITY IN HUESCA PROVINCE (SPAIN). A SITE-SPECIFIC PROTOCOL DESIGN FOR WASTE CONDITIONING AND HANDLING FOR EX SITU FINAL TREATMENT.	15:26	3. Yago de Souza Guida (ONLINE), Joao PM Torres, Rodrigo Ornellas Meire. BRAZILIAN PEOPLE STILL UNDER INCREASED RISK OF CANCER DEVELOPMENT DUE TO HEXACHLOROCYCLOHEXANE INHALATION EXPOSURE.
16:00	5. Checa-Fernández, A., Santos, A., Romero, A., Domínguez, C.M. REMEDIATION OF HCHs-POLLUTED SOILS BY SURFACTANT-ENHANCED WASHING AND ACTIVATED PERSULFATE OXIDATION.	16:00	5. Martin Forter (ONLINE). THE EXAMPLE OF UGINE-KUHLMANN HUNIGUE/FRANCE: THE REMEDIATION OF NOVARTIS AND THE QUESTION: DOES THE FRENCH INVENTORY FULLY COVERS THE LINDANE WASTE OF THIS LINDANE FACTORY?		**Second part: New approaches to testing of chemicals based on OMICs and epidemiology: Example developmental neurotoxicity**
16:15	6. Alonso T., Alcalde D., Escobar-Arnanz J., Encinas R., Fernández J. AIR SPARGING AND SOIL-VAPOR EXTRACTION PILOT TESTS IN BAILIN LANDFILL, SABIÑANIGO (HUESCA).	16:15	6. Jaromir PLCH. (ONLINE) POLLUTION BY PESTICIDES, LINDANE AND SIMILAR SUBSTANCES IN SLOVAKIA.	15:39	4. Joelle Rüegg. CONCEPT: EPIDEMIOLOGY- AND OMICS-BASED DEVELOPMENT OF AN IN VITRO TEST BATTERY FOR DEVELOPMENTAL NEUROTOXICITY.
				15:52	5. Carl-Gustaf Bornehag. EPIDEMIOLOGY IN CHILDREN AS A BASIS FOR TEST DEVELOPMENT.
				16:05	6. Walter Lichtensteiger. USE OF COMPARATIVE TRANSCRIPTOMICS FOR TEST DEVELOPMENT.

WEDNESDAY, 22 FEBRUARY 2023

ROOM 1: AUDITORIUM (1st floor)		ROOM 2 (3rd floor)		ROOM 3 (ground floor)	
16:30	7. Santos A., Lorenzo D., Domínguez C.M., Cotillas S., García Cervilla R., Fernández J., Guadaño J., Gómez J. PILOT TEST SEAR APPLICATION IN SARDAS LANDFILL REMEDIATION.	16:30	7. Mickovski A., Andonova, S. REMOVAL OF TECHNICAL AND ECONOMIC BARRIERS TO INITIATING THE CLEAN-UP ACTIVITIES FOR ALPHA-HCH, BETA-HCH AND LINDANE CONTAMINATED SITES AT OHIS.	16:18	7. Joelle Rüegg. CONTRIBUTION OF EPIGENETICS TO TEST DEVELOPMENT.
16:45	8. Lorenzo D., Domínguez C.M., García Cervilla R., Santos A., Checa-Fernández A., Fernández J., Guadaño J., Gómez J. ISCO AND S-ISCO EVALUATION IN THE REMEDIATION OF SARDAS ALLUVIUM.	16:45	8. I. Avramikos, G. Tsaimos, K.Prekas. REMOVAL OF TECHNICAL AND ECONOMIC BARRIERS TO INITIATING THE CLEAN-UP ACTIVITIES FOR ALPHA-HCH, BETA-HCH AND LINDANE CONTAMINATED SITES AT OHIS.	16:31	8. Pim Leonards. ROLE OF METABOLOMICS IN TEST DEVELOPMENT AND CONCLUSIONS.
17:00	9. Isidro, J., Fernández-Cascán, J., Guadaño, J., Sáez, C., Rodrigo, M.A. DESIGN AND VALIDATION OF ELECTROKINETIC TECHNIQUES FOR THE REMEDIATION OF THE ALLUVIAL SILT OF THE SARDAS LANDFILL (SABIÑANIGO) CONTAMINATED WITH HCHs.	17:00	Discussion.	16:44	Discussion.
17:15	10. Isidro, J., Fernández-Cascán, J., Guadaño, J., Sáez, C., Rodrigo, M.A. DISMANTLING STRATEGIES FOR HIGHLY HCH-POLLUTED LANDFILL LEACHATE DUMP USING ELECTROCHEMICALLY ASSISTED TECHNOLOGY.				
17:30	Discussion.				

17:30 – 19:00 COFFEE BREAK **(HALL ROOM -1ST FLOOR)** SPONSORED BY: emgrisa

17:30 – 19:00 **POSTER SESSION -(HALL ROOM -1ST FLOOR) (Block 15)**

Cotillas, S., Santos, A., Lorenzo D., Bahamonde A., Palomo E., Conte L. REMEDIATION OF GROUNDWATER POLLUTED WITH HCHs USING SOLAR LIGHT IRRADIATION.

Salom, D., Fernández-Verdejo, D., Soder-Walz, J.M., Vicent, T., Marco-Urrea, E., Blánquez, P. COUPLING ELECTROKINETIC SOIL FLUSHING WITH BIOREMEDIATION FOR THE REMOVAL OF CHLORINATED BENZENES AND LINDANE IN GROUNDWATER.

Sala, M., Scaramozzino, P., Beccaloni E., Scaini F., D'Isidoro A., Iudicone G., Papa Caminiti L.N., Rombolà P., Neri, B. SNI SACCO RIVER VALLEY – CENTRAL ITALY: CHARACTERIZATION OF AGRICULTURAL AREAS.

Pardo, A., Bellas, R., Franco, S., Camiño, J.M. INTEGRAL INVESTIGATION ON THE COUNCIL OF O PORRIÑO, LOOKING FOR SOLUTIONS TO THE GREAT DISPERSION OF THE CONTAMINATION.

Fraile, J. M., Herrerías, C. I., Lumbreras, R., Mayoral, J. A., Salvatella, L. DISPOSAL OF PRODUCTION WASTE FROM LINDANE MANUFACTURING: COLLABORATION BETWEEN UNIVERSIDAD DE ZARAGOZA AND GOBIERNO DE ARAGÓN

Santos, A., Checa-Fernández, A., Domínguez, C.M., Martín-Sanz, J.P., Valverde-Asenjo, I., Quintana-Nieto, J.R., Fernández-Sanjulián, J., Chicaiza-Guerra, K.Y. PRELIMINARY STUDY OF THE BIOREMEDIATION CAPACITY OF HORSE AMENDMENT SOILS CONTAMINATED WITH HCHS.

Amirova, Z. ASSESSMENT OF IN-SITE DIOXIN DEGRADATION IN WASTE, 1995-2021.

Navarro, I., De la Torre, A., Sanz, P., Martínez, M. A. ASSESSING PERSISTENT ORGANIC POLLUTANTS IN SPANISH AIR.

Ilona van der Kroef USE OF PORTABLE XRF ANALYZER AT POPs CONTAMINATED SITES - HOW TO RECOGNIZE AND AVOID THE MOST COMMON MISTAKES.

Chaos, Z., Méndez, A., Celeiro, M., García-Jares, C., Monterroso, C. IMPACT OF ORGANIC MATERIALS ON HEXACHLOROCYCLOHEXANE VOLATILIZATION FROM CONTAMINATED SOILS.

Monia PERUGINI, Annamaria IANNETTA, Giovanni Angelozzi, Lucia COPPOLA, Sabrina TAIT, Enrica FABBRIZI4, Lorella CIFERRI5, Cinzia La Rocca. PESTICIDE EXPOSURE AND PREMATURE IDIOPATHIC THELARCHE IN GIRLS: THE PEACH PROJECT.

Rodríguez-Arévalo, J., Castaño, S., Martín-Ruiz, M., Rodríguez-Abad, R., Asanza, E., Delgado, F., San Román, J. DESIGN AND EVALUATION OF TEST BY OXIDATIVE METHOD FOR DECONTAMINATION OF THE WALLS OF THE OLD INQUINOSA FACTORY

THURSDAY, 23 FEBRUARY 2023

ROOM 1: AUDITORIUM (1st floor)		ROOM 2 (3rd floor)	
09:00 11:30	**Session 1: EMERGING POLLUTANTS. PFAS SESSION. PART 1** (Block 12) *Chairs: Roland Weber & Dietmar Müller Grabherr/Guido Van de Coterlet (20 min /speaker)*	09:00 11:30	**Session 1: PCB MANAGEMENT** (Block 13) *Chairs: Dirk Jan Hoogendoorn & Ed Verhamme (15min /speaker)*
09:00	1. Roland Weber. PFAS CONTAMINATED SITES – A PERSONAL JOURNEY AND SOE; LESSONS LEARNED.	09:00	1. Dirk Jan Hoogendoorn. PCB PROJECTS IN EMERGING ECONOMIES: NEED FOR LOCAL TREATMENT, STOCKHOLM CONVENTION DEADLINE 2028, TRANSPORT AND EXPORT OBSTACLES.
09:25	2. Joerg Frauenstein (ONLINE). PFAS IN SOIL AND GROUNDWATER – PROGRESS AND COMPREHENSIVE CHALLENGES IN GERMANY.	09:15	2. Barbarasa, I., Plesca, V., Cupcea, L., Marduhaeva L. PCB MANAGEMENT AND ELIMINATION IN MOLDOVA.
09:50	3. Frank Thomas Lange (ONLINE). INVESTIGATIVE SOIL AND WATER ANALYSIS AT AN OUTSTANDING LARGE-SCALE CONTAMINATED SITE: HOW NOVEL APPROACHES CAN HELP TO SOLVE THE PFAS PUZZLE.	09:30	3. M. Gil-Díaz, R. A. Pérez, J. Alonso, E. Miguel, S. Diez-Pascual, M. C. Lobo. NANOREMEDIATION OF A SOIL POLLUTED WITH PCBS AND CR.
10:15		09:45	4. Roland Weber. MONITORING DIOXINS AND PCBS IN EGGS AS SENSITIVE INDICATORS FOR ENVIRONMENTAL POLLUTION AND GLOBAL CONTAMINATED SITES AND RECOMMENDATIONS FOR REDUCING AND CONTROLLING RELEASES AND EXPOSURE.
10:35	4. Greet Schroeters (ONLINE) THE BELGIUM 3M CASE FROM A HEALTH PERSPECTIVE.		
10:55	5. Johan Ceenaeme (ONLINE). PFAS POLICY FOR SOIL AND GROUNDWATER IN FLANDERS (BELGIUM). Discussion.	10:00	5. Edgard Bilger. SODIUM TECHNOLOGY – THE CHOICE FOR TREATMEN T OF PCB AND POP'S.
		10:15	6. Frank Wauters. PCB DECONTAMINATION: AUTOCLAVE TECHNOLOGY. CASE STUDY: TREATMENT OF PCB CONTAMINATED TRANSFORMERS.
11.15	*6.* Mayor Paweł Silbert (ONLINE). JAWORZNO PERSPECTIVE	10:30	7. Egmont W Ottermann. THE SUB-SAHARAN CEMENT INDUSTRY POTENTIAL FOR THE DESTRUCTION OF POP'S, PCB AND OTHER HAZARDOUS CHEMICALS.
		10:45	8. Ed Verhamme. CO-PROCESSING PCB & OTHER POP'S IN CEMENT KILNS A LOCAL SOLUTION.
		11:00	9. Aleksandryan, A. (ONLINE)*, Khachatryan, A. INVESTIGATION FOR DIOXINS / FURANS AND DIOXIN-LIKE POLYCHLORINATED BIPHENYLS IN ARMENIA.
		11:15	Discussion.
11:30 12:00	COFFEE BREAK (HALL ROOM -1ST FLOOR) SPONSORED BY: emgrisa		
12:00 14:00	**Session 2: EMERGING POLLUTANTS. PFAS SESSION. PART 2** (Block 12) *Chairs: Roland Weber & Dietmar Müller Grabherr (20min /speaker)*	12:00 14:00	**Session 2: TOXICOLOGY: CHEMICAL EXPOSURE OF WILDLIFE AND HUMANS** (Block 14) *Chairs: Daniela Lud & Stephan Robinson (15min /speaker)*
12:00	7. Xenia Trier (ONLINE). THE CRITICAL ROLE OF CHEMICAL REFERENCE STANDARDS IN THE RISK GOVERNANCE OF CHEMICALS	12:00	1. Morcelle, S., Tirado, L. PESTICIDES AND WILDLIFE FRIENDLY FARMING.
12:20	8. Dietmar Müller Grabherr (ONLINE). FOREVER CHEMICALS" VS. "ONE HEALTH" – PFAS, A CALL TO RETHINK HOW WE MANAGE CONTAMINATED LAND!	12:15	2. Annamaria Iannetta; Monia Perugini; Michele Amorena; William Gentile; Giovanni Angelozzi; Leonardo Della Salda; Marcella Massimini. TOXICOLOGICAL EVALUATIONS OF GLYPHOSATE IN ZEBRAFISH EARLY-LIFE STAGES.
12:40	9. Journalist Consortium (ONLINE). PFAS CONTAMINATION AND PRESUMPTIVE CONTAMINATED SITES IN EUROPE – WHAT NEED TO BE KNOWN BY THE PUBLIC AND GOVERNMENTS.	12:30	3. Ahmad Mahdavi. HIGHLY HAZARDOUS PESTICIDES (HHP) IN EU COMPARED TO DEVELOPING COUNTRIES, CASE STUDY: HHP HISTORY AND USE IN IRAN.
13:00	10. Sergejus Ustinov (ONLINE). PER-AND POLY-FLUORALKYL SUBSTANCES (PFAS) AND THE GLOBAL DIMENSION OF SOIL POLLUTION	12:45	4. Minacori Marco, Natali Pier Giorgio, Paglia Giuliano, Fiorini Sara, Altieri Fabio, Eufemi Margherita. TOMATO AND OLIVE MICRONUTRIENTS AS "HUMAN BODY REMEDIATION" IN PEOPLE LIVING IN CONTAMINATED AREAS: FOCUS ON B-HEXACHLOROCYCLOHEXANE.
13:20	Discussion	13:00	5. Toichuev, R (ONLINE), Toichueva, A., Zhilova, L., Paizyldaev, T. (Online in English in Kyrgyzstan). THE USE OF THERAPEUTIC AGENTS DERIVED FROM THE PLANTS AND FRUITS GROWING IN KYRGYZSTAN FOR THE ELIMINATION OF ORGANOCHLORINE PESTICIDES FROM GASTROINTESTINAL TRACT OF NURSING WOMEN.
		13:15	6. Paizildaev, T. (Online in English in Kyrgyzstan), Zhilova, L., Toichuev, R. (ONLINE), Sakibaev, K., Toichueva, A., Mamasharipov, K. OUR EXPERIENCE OF APPLYING THE RESULTS OF RESEARCH AND EVIDENCE-BASED MEDICINE FOR IMPROVING THE AWARENESS, ACHIEVING COMPLIANCE WITH SAFETY MEASURES AND IMPLEMENTING RECOMMENDATIONS BY THE POPULATION LIVING IN THE AREAS POLLUTED BY ORGANOCHLORINE PESTICIDES.
		13:30	Discussion

THURSDAY, 23 FEBRUARY 2023		
ROOM 1: AUDITORIUM (1st floor)		**ROOM 2 (3rd floor)**
14:00 15:00	**CLOSURE SESSION** - Mrs. Elena Cano Head of the Contaminated Soils Service (Government of Aragon) - Mrs. Maria Victoria Esteruelas Aragonese Society of Agri-Environmental Management (SARGA) /Vicente Ros. Responsible for Climate Change and Circular Economy Control Union - D. John Vijgen - International Association of HCH and Pesticides (IHPA) - Mr. Bram de Borst Chair of the Board (IHPA) - Mr. Carlos Gamarra - Managing Director Climate Change and Environmental Education (Government of Aragon)	
15:00 16:30	CLOSURE LUNCH **(HALL ROOM -1ST FLOOR)** SPONSORED BY:	
16:30 17:30	**FINAL DECLARATION** (**DISCUSSION FACE TO FACE -NO ONLINE/ NO INTERPRETATION*)	

FRIDAY, 24 FEBRUARY 2023: FIELD TRIP SABIÑANIGO MEGASITE	
07:20-07:30	**Departure from Zaragoza** at the meeting point in Plaza del Pilar
07:30- 09:00	Zaragoza – Sabiñánigo (90 min)
09:00- 09:30	COFFEE at Pirenarium (30 min)
09:30- 13:00	Sites visit (INQUINOSA, SARDAS y BAILIN) (3,5 h)
13:00 - 13:50	BRUNCH at Pirenarium (50 min)
14:00-15:30	**Return to Zaragoza:** 1ST stop Train/ bus Station /2nd stop morning meeting point in Plaza del Pilar (90 min)