



## SPEAKER BIOGRAPHIES AND ABSTRACTS V2 25.09.2023

### Plenary Session 1

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**Massimo Planera**, Arma Dei Carabinieri

Massimo is the Commander of the Central Operations and International Cooperation Unit at the Carabinieri Command for Environmental Protection and Energy Security. He has held command of important investigative units of the Carabinieri Corps, also operating in contexts characterised by a high crime rate, such as Campania and Calabria, or by the constant risk of significant environmental pollution, such as the Site of National Interest in Massa-Carrara and the tanning, textile, gold, paper and marble quarrying districts of Tuscany. Due to his many years of operational service experience and studies, he is considered an expert in the field of safety and environmental protection.

**Anne Brosnan**, Environment Agency England and President of ENPE

Anne BROSINAN is President of the ENPE, Chief Prosecutor at the UK Environment Agency, and member of Executive Board, Interpol's pollution Crime Working Group. She is qualified as a solicitor in both England and Australia where she spent time with the Department of Environment and Conservation in Sydney. She has a Masters degree in Environmental Quality Management and over thirty years experience of operational environmental crime prosecution. Anne was instrumental in the introduction of the English environmental civil sanctions regime in 2010. She is President of the European Network of Prosecutors for the Environment (ENPE), an Honorary Associate of INECE and a Board Member of Interpol's Pollution Crime Working Group.

### Plenary Session 2

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Gen.D. Claudio Domizi - General Commander of the Carabinieri

By Italian Minister of the Environment

National Antimafia prosecutor

### Plenary Session 3

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**Ana Garcia**, Chair of IMPEL

Inspector Director of the Unit for Institutional Cooperation and International Affairs, at the General Inspection for Agriculture, Sea, Environment and Spatial Planning (IGAMAOT, Portugal) and Chair of IMPEL. Environmental and Nature Conservation Inspector and participating in IMPEL Projects since 1999, worked on the fields of nature conservation, industry and air, waste and TFS and water protection. PhD in Environmental Sciences on the theme "Implementation of Environmental Legislation".



Co-funded by  
the European Union



**Ondrej Koporec**, Chair of EnviCrimeNet

Mr. Ondrej Koporec, born in 1981, has been employed by the Police Force of the Slovak Republic since 2005. During his tenure, he initially served as a local police investigator for a period of 2 years. Subsequently, he spent 13 years specializing in environmental crime within the police force. As of 2019, he assumed the role of the head of the investigation unit within the Department for Detection of Hazardous Substances and Environmental at the Presidium of the Police Force.

Starting in 2015, Mr. Koporec became a member of the steering group for EnviCrimeNet, and his involvement in the organization has continued, culminating in his appointment as chair in 2023. Furthermore, since 2018, he has represented the Slovak Republic as a co-driver in the priority of environmental crime within the EMPACT framework.

His extensive range of responsibilities encompasses criminal investigations, active participation in the inquiry of noteworthy environmental crime cases, methodological leadership within the police force, collaboration across different government agencies, and engagement in international cooperative efforts.

**Jan Van den Berghe**, EUFJE

Jan Van den Berghe was lawyer from 1985-1991 and specialized in environmental cases. In 1991 he was nominated judge in the Court of First Instance in Ghent. He dealt mainly with criminal environmental cases and still do so. Since 2002 he is vice president of what is now the Court of First Instance East Flanders. From 2008-2016 he was member of the Belgian High Council of Justice. He is funding member of TMR, the Flemish Environmental Law Review, and published on environmental law and he is also member of EUFJE (European Forum of Judges for the Environment) since the beginning. Since 1995 he organizes environmental law trainings for the Belgian Judicial Training Institute (open for judges, prosecutors, inspectors and police).

**Anne Brosnan**, President of ENPE

*Biography in Plenary Session 1*

## **Plenary Session 4**

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**Vita Jukne** – ENV E.4 Environmental Rule of Law and Governance, DG Environment

*Presentation Abstract: Update on environmental policy developments at the EU level*

## **Plenary Session 5**

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**Pieter Beck** PhD is a scientist at the Joint Research Centre of the European Commission. He studies how human activities affect the environment, especially forests, through climate change and disturbances. His work relies heavily on earth observation, from satellites as well as aircraft, to monitor environmental change. His current research investigates and tests how geospatial technologies can support environmental compliance assurance. Pieter holds a doctoral degree from



the University of Tromsø, Norway, and worked at the Woods Hole Research Center in Massachusetts before joining the European Commission in 2013.

**Presentation title: Geospatial Intelligence for Environmental Compliance Assurance**

**Presentation Abstract:** *Geospatial data are being generated at unprecedented rates; more satellites than ever before are orbiting Earth collecting data, and most adults carry a phone around that collects geolocated information. When combined with domain-specific expertise and modern computing power, these data offer new opportunities to better track or investigate compliance with the law. Satellite or aircraft observations are already being used to inform control and enforcement activities in Europe e.g. for policies related to marine pollution or agriculture. However, when it comes to monitoring the application of environmental law in Europe, geospatial data are not yet used to their full potential. The European Commission has committed itself to promoting the use geospatial intelligences in EU Member States for environmental compliance assurance. The services of the Copernicus programme are now all tasked with supporting environmental compliance assurance. Among these, the Copernicus Emergency Management Service, supports all actors in the management of natural or manmade disasters. They offer mapping products that can be generated according to tailor-made specifications benefiting from images from satellites, as well as manned or unmanned aircraft. The Copernicus Security Service covers support to EU External and Security Actions. One of its tasks is to provide geospatial information to assist the EU and its Member States in monitoring the implementation of EU law. Environmental compliance assurance across Europe may benefit from the possibilities now offered by these and other Copernicus services to generate geospatial intelligence.*

**Ion Nedelcu**

Director for Environment and Security projects in the Romanian Space Agency. Since 2004 he was involved in many EU and UN funded projects on land cover mapping, land information systems, water information management systems, ecosystems mapping and evaluation, geospatial intelligence. Currently he's in charge with technical coordination of the activities related to geographic information systems design, system development, geospatial data processing and analysis. Since 2008 he's a national representative in GEO, Copernicus and geospatial technology workgroups and committees at European and International level. Since 2017 he's the national point of contact in Romania for Copernicus Sentinels Collaborative Ground Segment activities.

**Presentation title: Geospatial Intelligence for Environmental Compliance Assurance**

**Presentation Abstract:** *With the GEOINT4ENV, a Copernicus User Uptake (FPCUP) activity, the partners aim at developing activities supporting the investigation of the performance of remote sensing and geospatial intelligence (GEOINT) methods to answer the information needs (where, when, what, why, who) related to illegal activities affecting the environment such as waste, water, air pollution and forestry, taking into account the EU relevant legislation and actions to improve environmental compliance and governance.*

*For the purpose of this activity, the partners agree to apply GEOINT principles and concepts - analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the earth - human and artificial intelligence, for solving problems related to environmental compliance and governance and, in this way, to answer on one hand the current challenges expressed at EU level on this subject and, on another hand, to provide strong incentives for a new category of user organizations at national and EU level for more efficiently solving the related problems, considering a promoting - inspection - action planning logic.*



*The activities conducted are aimed at achieving a number of specific goals: share practices, including information on costs and benefits; identify common technical and regulatory user requirements; develop showcases; address the need for training; provide best practice guidelines for industry and regulatory bodies; address regulatory obstacles; address obstacles to the sharing and use of relevant data and information; address investment issues.*

### **Pasquale Fimiani**

He has been a member of the Judiciary since 1986, acting as a public prosecutor in criminal and civil matters. Since 2011, he has worked in the General Prosecutor's Office at the Court of Cassation as Deputy Prosecutor General, and since 2021 as Advocate-General.

He currently works in the criminal sector.

He is in charge of the Network of Prosecutors General at the Courts of Appeal, whose main goal is the steady and continuous monitoring of uniform prosecution. He is the Head of the Division taking the decisions on the EPPO as National Authority, according to the provisions of Regulation (EU) 2017/1939. He is the author of several articles and publications on Economic Criminal law and Environmental Law. He teaches at several Italian Universities and at the High Council for the Judiciary. He is the full member for Italy of the ENPE (European Network of Prosecutors for the Environment).

**Giuseppe Sgorbati** was the Scientific Director at ARPA (EPA) Lombardia (IT), until retirement in 2020; the cooperation still officially continue as senior consultant.

In IMPEL since 2014, former Water and Land Expert Team leader, now co-leader in National Peer Review Initiative project. Adjunct lecturer in Physics at Milan Bicocca University. Consultant to the last committee of inquiry on waste crimes of Italian Parliament. Committed in a research program on the use of Artificial Intelligence in criminal environmental jurisdiction with Fondazione Vittorio Occorsio, along with Italian prosecutors specialized in environment.

### **Presentation title: Artificial Intelligence and its application**

**Presentation Abstract:** *The development of artificial intelligence systems (AI) has aroused interest in the Italian judicial and environment protection systems because of the new potentials available in the fight against environmental crimes and, in general, in compliance assurance initiatives.*

*To give an answer to these interests, the Fondazione Vittorio Occorsio has promoted, since 2021, studies and evaluations through a specific workgroup partaken by judiciary system members, environmental authorities and polices experts, to create the conditions for timely choices and decisions about the use of AI in environmental jurisdiction, trying to face the challenges posed also by speed of the evolution of matter.*

*Some of the most interesting findings of these insights are briefly summarised in this report.*

*To understand the applicability of artificial intelligence in the jurisdiction and in the protection of the environment, it was necessary, first of all, to acquire the awareness, at least at a basic level, of the mechanisms and logics on which it is based, to understand what may be the critical issues related to its use in the specific field of justice. The fact that its operating logics can escape the understanding of human operators can by consequence represent a criticality, especially in this field.*

*It was interesting to approach the areas, both as countries and as themes, in which AI systems are now most exploited. They correspond to those in which the availability of good quality digital information is greater, since, in the case of AI, it is based on an inferential logic developed through a huge amount of practical examples, in a way partially similar to some mechanisms of human intelligence based on the experience.*

*The report will illustrate the most significant examples, mapped by the activity of the Vittorio Occorsio Foundation, of the use of artificial intelligence for environmental compliance assurance, or of projects with these objectives:*



- *Definition of inspection programs in different environmental sectors, through machine learning based on administrative and environmental databases, in the sectors of water discharges and waste. The objective of the use of AI tools in this case is to maximize the effectiveness of the detection of illegal situations through risk analysis of authorized installations.*
- *Use of automatic recognition systems, in aerial images (airplane or satellite), of illegal waste deposits, or of unauthorized polluting installations. The principles of computer vision, realized through deep learning tools, lead to the possibility of automatically analyzing large portions of territory in search of sites morphologically corresponding to environmental criticalities*
- *The Detection of the presence of fraud in the information relating to self-checks carried out by companies is also briefly addressed.*

*The examples described are probably only a small portion of the uses and potential of the technique. However, it is necessary to carefully consider the enabling conditions for the use of AI, starting from the availability of an adequate wealth of predictors to be used for the development of the systems, but also the boundary conditions, including the organizational and regulatory framework in which the structures that decide to use the technique operate.*

*The issue, in general, is characterized by numerous reasons for attention, including those introduced with the adoption by the European Parliament of the AI Act and requires a wide awareness and deep study, both on the technical level, on the application and legal levels.*

*Consequently, it is proposed to open a specific work interdisciplinary area within the 4 Networks, also considering the need to address the issue according to all the different operational dimensions of environmental protection, all involved in the management of the results of the application of AI: inspection, police action, prosecution and judgment.*

### **Jennifer Vanderputten – European Public Prosecutor’s Office**

Jennifer became a prosecutor at the Brussels Prosecution Office in 2009. She first integrated the Financial and Economic Crimes section where she specialized in environmental crimes. In 2013, she became a spokesperson and joined the organized crime section. Jennifer transferred to the Prosecutor General’s Office in 2016, where she handled appeals against seizures during the investigation, ensured the Court hearings in a variety of cases and implemented the Law on the Execution of the Proceeds of the Crime.

Jennifer joined the European Public Prosecutor’s Office in 2021 as a European delegated Prosecutor. She currently acts as coordinator of the Brussels Office.

#### **Presentation Title: *The European Public Prosecutor’s Office, environmental crimes and asset recovery***

**Presentation Abstract:** *Following decades of negotiations, the European Public Prosecutor’s Office (EPPO) finally started its operations on 1 June 2021.*

*The EPPO puts in place a new method of international cooperation, created by the 2017/1939 Council Regulation on enhanced cooperation. It is unique in the world: one single prosecutor’s office spread across 22 countries.*



*The EPPO's legal basis, mandate and structure will be presented here, with a focus on international cooperation through Art.31 Reg. 2017/1939, and with specific attention given to the EPPO's asset recovery strategy and practices.*

*Within the first year and seven months of operational activity, the EPPO initiated over 1 200 investigations, threw a spotlight on over €14 billion in criminal damage to the EU budget and seized over €350 million. The debate is ongoing as to whether or not its competence should be extended to environmental crimes.*

## Plenary Session 6

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**Sara Boogers** - Belgium

Eerste substituut-procureur des Konings - Openbaar Ministerie Antwerpen  
Head of the Team Environmental Crime and Food&Pharmacrine Antwerp

Graduating in 1997 as a Master of Law at Antwerp University, Sara started her professional career as a lawyer in a general practice law office. In 2002 she passed her exams for the Justice Department and started working as a magistrate in the Public Prosecutor's Office in Antwerp, where she continues to work today. In December 2016 she was promoted to Senior Deputy Public Prosecutor. Since May 2021 she is leading the Team Environmental Crime and Food&Pharmacrine in Antwerp.

Sara started her specialisation in environmental law enforcement in 2005 and since then has continued to work in the Team Environmental Crime in the Antwerp prosecutor's office. She was a member of the Flemish High Council of Environmental Enforcement from 2011 to 2017, and is a supporting member of ENPE since 2012.

Sara has been a speaker and participant at different (international) conferences and workshops on EU Environmental Law. She is also involved in the training programme on environmental law of the Belgian National Judicial Training Institute.

**Sigrid Raedschelders** - Head of the Enforcement Division of the Department of Environment and Spatial Development, Flanders

Graduating in 1996 as a Master of Law at the Catholic University of Leuven, Sigrid started her professional career as a lawyer, with focus on administrative law. In 2002 she started working for the Flemish department of Environment, especially in international processes and legal affairs. She worked as legal advisor for the Flemish minister of Environment for 5 years. After she obtained a master degree in public management in 2009 she started a new division on administrative environmental enforcement. She was/is engaged in various consultative bodies with the magistracy and she was vice-president of the Flemish High Council of Environmental Enforcement. In 2017 she became head of the Flemish environmental inspection as well. Sigrid has been a speaker and participant at different conferences and training programs on environment enforcement.

***Presentation title : Administrative and judicial cooperation in the fight against environmental crime - The Flemish Approach***



**Presentation abstract:** *The speakers will present an overview of the Flemish legislation on environmental enforcement and sanctioning, highlighting the therein embedded interaction between administrative and judicial enforcement. They will explain how the official networks representing both the administrative authorities and the public prosecutor's offices try to achieve a cohesive enforcement policy as well as practical agreements on the interaction between the administrative and judicial actors. Some concrete examples of cases will be presented as well.*

**Ann Carette**, Council for permit disputes - University of Antwerp.

Ann Carette graduated as a master of laws at the Free University of Brussels in 1991. She obtained her PhD at the law faculty of the University of Antwerp in 1997 on the subject of remediation for pure ecological damage.

She worked as a civil servant for different environment agencies of the Flemish Region until 30th April 2022 and was an part-time associate professor environmental law at the University of Antwerp, Faculty of Law until 30 September 2022. She now is an administrative judge at the Council for Permit Disputes of the Flemish Region since 1st May 2022 and a post-doc researcher at the University of Antwerp.

Next to environmental liability law she is particularly interested in water law as part of environmental law.

**Presentation Abstract:** *In the first part of this contribution a brief overview will be given of the different forms of damages caused by environmental crimes and their assessment challenges. Regardless of these challenges, remediation of damage to the environment in the context of enforcement is of major importance, as will be demonstrated during the rest of this introduction.*

**Francesco Andreotti**, Head of the Emergency Planning and Response Unit of the Area for Environmental Emergencies on Land, ISPRA

Francesco is an Environmental Engineer and holds a Master's Degree in Energy and Environmental Management. He has been working for ISPRA (Italian National Institute for Environmental Protection and Research) since 2004, earlier as permit writer and inspector under IPPC-IED Directives and successively for the enforcement of the Environmental Liability Directive (ELD), becoming representative for ISPRA in the "ELD Government Expert Group" of the EU Commission and project leader of the IMPEL project called "Criteria for the Assessment of the Environmental Damage". Since May 2023 he's become "Head of the Emergency Planning and Response Unit" of the "Area for Environmental Emergencies on Land".

***Presentation title: "Environmental" and "substantial" damage in the context of the ELD and ECD***

**Presentation Abstract:** *The presentation will provide the Environmental Liability Directive in a nutshell and highlight the reference concepts of the Directive and some parameters to consider for the assessment of actual and potential 'environmental damage'.*

*The presentation will briefly consider ELD and ECD approaches and identifies their possible synergies with other Directives to overcome the relevant issues about the assessment, remediation and compensation of damages.*

*At the end of the presentation some possible solutions towards a more effective implementation and enforcement of ELD and ECD are provided.*

**Anabela Rebelo**, APA

PhD in Chemistry and MSc in Industrial Chemistry



Senior officer, water resources department, Portuguese Environment Agency

Main areas of expertise involve water resources management & permitting, water quality, water damage, wastewater discharges, water reuse and, environmental risk assessment.

Project manager of the IMPEL project “Wastewater in Natural Environment (WiNE)”. Expert in the ISO TC 282 for water reuse and Portuguese focal point in the CIS WG on Water Reuse. Member of the I&D unit FibEnTech – Fiber Materials and Environmental Technologies, University of Beira Interior, Portugal.

Several publications in scientific journals and conference proceedings.

### **Antonio Quintas, IGAMAOT**

***Presentation Abstract:** A hazardous event can result in damage for water resources with severe effects over the quality of the water bodies, its uses and/or over the services of respective aquatic ecosystems. In a classical approach, is usual to predict possible effects that may arise from an abnormal situation, namely through a risk assessment in a certain spatial and temporal reference. The process involves the risk characterization that depends on:*

- the potential of the event to cause damage, i.e. its specificities, such as the intrinsic characteristics of the pollutants;*
- the consequence of the event, that depends on the susceptibility of the water resources to pollution, namely the physical, hydrogeological, morphological characteristics, uses and services of the water body and the damages that may occur due to the specificities of the hazardous event (e.g., pollutants toxicity).*

*Thus, in the present study is defined a conceptual methodology, supported by the classical mathematical methods for the risk characterization and knowledge-based models, but considering in all cases the temporal and spatial references where the hazardous event has already happened or is in progress. In this situation, the "probability of its occurrence" is 100%, allowing to measure the effective result of a real situation. The use of importance scales allows to measure results in a numerical scale, promoting the assessment of magnitude of damage for water resources. When a hazardous event returns a high magnitude means that the negative effects over the water bodies are considered as significative, and therefore could represent a substantial damage for water.*

### **Jan Van den Bergh, EUFJE**

*For biography see Plenary Session 3*

***Presentation Abstract:** The BIOVAL project is a joint project of EUFJE, IMPEL and ENPE and intends to create a non-binding, practical instrument to value ecological damages in court. BIOVAL focuses not on sanctioning, but on financial restoration. Similar instruments are used to assess compensation amounts health, material, economic, and ecological damages.*

### **Olga Olson, OECD**

Ms. Olga Olson is Project Manager, Environmental Compliance Assurance and Liability Regimes, in the OECD Environment Directorate. Ms. Olson is currently leading work on environmental compliance assurance in the Eastern Partnership countries within the framework of the EU-funded EU4Environment Action project.





**Presentation title: OECD initiatives on environmental compliance promotion and enforcement**

**Presentation Abstract:** *The presentation will cover relevant OECD work, which includes that on compliance promotion and enforcement strategies, instruments, on the measurement of results as well as on the use of digital technologies for policy design and implementation and on environmental crime in the OECD Member countries and beyond.*

**Katie Olley** SEPA/IMPEL

Katie Olley is an international waste shipment specialist for the Scottish Environment Protection Agency, working in policy and systems development, applications, oil industry decommissioning and enforcement. She is the Project Leader for IMPEL's flagship Shipment of Waste Enforcement Actions Project. This Project aims to raise the level of waste shipment inspections across Europe and inform the regulatory cycle. Katie was also the Chair of the Basel Convention's ENFORCE Network from 2019 until this year.

Prior to joining SEPA, Katie was a lobbyist for the Dutch Waste Management Association working on European policy development related to waste. She has also worked as a technical editor on landfill publications, and for ICI and Nalco BV as a chemist.

**Presentation title: How to measure enforcement results? The experience drawn from SWEAP Life Project**

**Presentation Abstract:** *The EU Waste Shipment Regulation (WSR) sets out the rules and procedures for the supervision and control of shipments of waste within the EU and with third countries. The WSR requires Member States to report on their compliance and enforcement activities and the outcomes of these to the European Commission. However, the reporting of waste shipment enforcement results is not harmonised across Europe and faces several challenges, such as data availability, quality, comparability, and reliability. This presentation will look at the evolution of collecting and analysing waste shipment inspection results over the last decade. It will cover the divergence in national practices across Europe, the development of a common data vocabulary, the digitisation of inspection recording and automating of recording results through the Shipments of Waste Enforcement Action Project (SWEAP). A presentation on data that will hopefully prove to be engaging.*

## **Breakout Sessions 1**

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**Theme 1 – How new techniques can be used to prevent and detect environmental offences?**

**Romano Ruggeri**, ARPAS/IMPEL;



Romano Ruggeri, Environmental engineer, Ph.D, Environmental Manager at the Sardinian Environmental Protection Agency (ITALY). Project leader of the Waste management & Circular economy IMPEL Project.

**Presentation title: *The End-of-waste database as a tool to promote the market of secondary raw material and support permitting and inspection processes***

**Presentation Abstract:** *End-of-waste circulation across MS borders is often hindered by a different interpretation of the End-of-waste criteria set in the Waste Framework Directive in the receiving and departure MS. Fostering the secondary raw material market means to homogenize the approaches to the End-of-waste case-by-case situations, where a lack of EU or national criteria is felt. An EoW database can help to provide permitting and inspection authorities (as well as operators themselves) those pieces of information to make clear and transparent the compliance to the required criteria, in order to avoid problems in the circulation of the EoW. An EoW "passport" is also included in the tool. The tool has been endorsed by DG ENV during previous meetings of the WMCE IMPEL project.*

**Faustino Gudín**, Judiciary of Spain/ EUFJE

Senior Judge with 26 years of experience, Court Clerk (on leave), Associate Professor at the University of Alcalá de Henares, Tutor Professor at UNED; Honorary Professor UAM, Collaborating Professor at the University of Valladolid, Professor Gregorio Peces Barba Foundation for the Defence of Human Rights, Ph.D. in Law with honours, Master in EU law, Graduated in Criminology, Graduated in Accounting, University Diploma in Anti-Money Laundering and Terrorist Financing. He has written 14 books in legal matters of his own, 26 shared papers, and 103 legal articles in legal reviews around the world, an international expert from the Council of the European Union and the Spanish Council of Judiciary working in twenty-two different countries in four continents. He is Tutor Professor of the Council of Europe Help program, member of the Pool of Consultants of the General Council of the Judiciary, member of Spanish Judicial Network (REJUE); member of EUFJE and representative of the institution in multiple events.

**Presentation title: *The role of geolocation in the Amazon rainforest***

**Presentation Abstract:** *Global warming is an indisputable phenomenon influenced by multiple variables, one of which is human activity. Among them, there is no doubt that the inability of the Amazon rainforest to continue to exert a cooling effect can be considered one of the clearest causes. In this context, three phenomena are shaking the Amazon: gold mining, illegal logging, and encroaching agricultural activity. The need to curb environmental crimes in an area that is very difficult to access seems very difficult to remedy. In collaboration with local judges and prosecutors, we conducted a field study in Peru on the incidence of technology as a deterrent factor, analysing the impact of the use of GPS tracking systems, smartphones, drones, and electronic tagging in the prosecution of environmental crimes. Given the effectiveness that these new technologies can bring, it is regrettable that they have not been introduced in a more systematic, organized and methodical way to counteract the rapid degradation of the Amazon.*

**Federico Benolli**, SAFE Senior Associate at Fondazione SAFE with a 15-years background in Security, Intelligence and CBRNe. He has been involved in the implementation of several EU-funded projects in the field of Security, Defence and CBRN risk mitigation for a total budget of >70M€, especially concerning International Security and Cooperation, Critical Infrastructure Protection, Counterterrorism, Emergency Management, and Technology Innovation. He has a five-years degree in Criminal Law, and two Masters' degree respectively in Forensic Science, and in Electronic Systems and Technologies for Security, Defence and Intelligence. He is also member of the NATO-STO



Technical groups: on *Operations Security and Susceptibility to Influence in the Information Environment*, and on *Operational CBR Threat Situational Awareness*.

**Presentation Title: *The EMERITUS project: a tangible example of how EU-funds are addressing the illegal trafficking of waste***

**Presentation Abstract:** *EMERITUS is an innovation project funded under the Horizon Europe programme that aims to create a single-entry point platform for Law Enforcement Agencies and Border Guards to improve investigative proof collection capabilities against environmental waste crimes. Against this backdrop, EMERITUS will implement a protocol for effective environmental crime investigation, leveraging on the integration of innovative monitoring and analysis technologies (e.g., drones, satellite data, virtual sensors, geo-intelligence data, etc.) and on a complementary training programme aimed at fostering environmental enforcement authorities, intelligence and investigation capabilities, at national and cross-border level. To achieve these goals, EMERITUS funds on 4 coordinated workstreams, involving law enforcement authorities, platform technical development, networking and validation in realistic conditions, leveraging on four selected use cases (UCs), concerning water contaminant source detection, water storage centers monitoring, cross-border illegal waste trafficking control, and identification of illegal waste discharge sites in broad areas.*

**Theme 2 – How to make environmental crime unprofitable?**

**Marc Van Cauteren, ENPE**

Marc Van cauteren - Marc was enrolled as public prosecutor in the Court of Antwerp Belgium in 1996 and from the 1<sup>o</sup> of April 1998 specialized in environmental law enforcement. From the 1<sup>o</sup> of June 2002 he was nominated as Chief, of this section and in January 2005 promoted to First Deputy District Attorney dealing with complex investigations in matters of waste fraud, including illegal ship breaking.

Although now retired, Marc continues training and teaching magistrates and other institutions giving back the experience of almost 25 years of environmental legal practice. Recent collaborations include delivering training for the French Ecole Nationale de la Magistrature and EU funded CEPOL Course on waste crime at the CEPOL Headquarters, Budapest, Hungary, last year.

**Presentation title: *Beaching Break-Up is a Waste Crime***

**Presentation Abstract:** *I want to explain why ship-breaking in f.i. India and Bangladesh is a crime. The abounded ship are beached and turned apart by hand labor in dangerous and non environmental friendly ways. The European law is still not able to stop this misuse for financial reasons only. The EU's Ship Recycling Regulation is too narrowly defined. The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships is world wide applicable , but still not adopted due to the high standards for the entering in force.*

*I'll show new methods to enforce the prosecution of ship owners and their company's and the confiscation of their profits, made by choosing these yards in stead of the recognized ship yards, 38 yards in Europe (EU, Norway and UK), 6 yards in Türkiye and 1 yard in the USA.*

**Kate Robinson, Australian Lawyer**

Kate Robinson - Kate is an experienced senior lawyer, executive leader and company director from Australia. She was Director Environment and Energy in the New South Wales (NSW) Department of Planning and Environment for many years, supporting the National Parks and Wildlife Service,



transition to renewable energy, biodiversity reform and government regulatory matters. She has expertise across areas including environment, biodiversity, heritage, planning, energy, arts, governance and litigation. Kate is accredited by the Law Society of NSW as a Specialist in Government and Administrative Law and is a member of the Society's Public Law Specialist Accreditation Advisory Committee. In 2021 she was awarded 'Government Lawyer of the Year' by the Women Lawyer's Association of NSW.

**Presentation title: Choosing a regulatory pathway: an Australian example**

*Presentation Abstract: tbc*

**Joe Poux, US Department of Justice**

JO POUX (Deputy Chief of the Environmental Crimes Section, US Department of Justice and Chair of Interpol's Pollution Crime Working Group) (United States of America)

Joe is the Deputy Chief of the Environmental Crimes Section at the US Department of Justice, where he supervises a staff of 36 environmental prosecutors. He has been with the Department since 2001. In addition to his management responsibilities, he supervises the Department's National Vessel Pollution Program. He is also Chair of INTERPOL's Pollution Crime Working Group, which conducted 'Operation 30 Days at Sea 2.0', the follow-up to 'Operation 30 Days at Sea', the largest-ever global law enforcement operation targeting marine pollution involving 58 countries. Prior to joining the Department of Justice, Mr. Poux spent 10 years with the Maryland Office of the Public Defender. He received a B.A. from Wheeling Jesuit University and a J.D. from the Georgetown University Law Center.

**JEFF R. BRAY** (Deputy Chief, Office of Maritime and International Law, US Coast Guard) (United States of America)

Mr. Jeff Bray is the Deputy, Office of Maritime and International Law at Coast Guard Headquarters in Washington, DC. This office is comprised of over 45 attorneys, both military and civilian, and provides legal advice and support in areas of prevention law, response law, environmental law, and international law. This office also provides legal support for Coast Guard participation in IMO committees and subcommittees, as well as Arctic Council working groups and task forces, and a variety of other international forums. Mr. Bray has served in this position since 2017.

*Presentation Abstract: tbc*

**Theme 3 – How can administrative and criminal law enforcement complement each other?**

**Darko Blinkov**, State Environmental Inspectorate, North Macedonia

Darko has 25 years experience in the field of environment and air quality. He has worked for 20 years in the Inspectorate, with 14 years as the State Inspector. He has focussed on environmental crime topics since 2007.

**Presentation title: Enforcement of legislation related to environmental crime in North Macedonia**

**Presentation Abstract:** *In criminal matters, the EU Directive 2008/99/EC on the protection of the environment through criminal law (hereafter Environmental Crime Directive) obliges Member States to establish criminal offences for certain violations of EU environmental legislation. This implies not only the introduction into national law of a minimum list of offences (Article 3 of the said Directive), but also the establishment of "effective, proportionate and dissuasive sanctions" (Article 5).*



*This directive was transposed into Macedonian national law through amendments to the Criminal Code in 2014. Unlike the French system, where offences are scattered in several codes, the Macedonian system has provided for a Chapter XXII specifically dedicated to "Crimes against the environment and nature", which now provides for 27 offences, which can be grouped into five categories:*

- 1) *General environmental offences, including environmental and nature pollution (Article 218) ;*
- 2) *Offences relating to hazardous materials (waste and nuclear materials)*
- 3) *Offences against fauna and flora, including: unauthorised introduction of wild species into the wild (Article 232-b); unauthorised trade, import or transport of wild flora and fauna (Article 232-c); acts of torture against animals (Article 233)*
- 4) *Offences relating to illegal hunting, fishing and fire*
- 5) *Other specific offences, including: production, trade or use of substances that deplete the ozone layer (Article 218-a); pollution of drinking water (Article 219)..*

*It should be noted that Macedonian criminal law distinguishes between "criminal offences" (which refer to both felonies and misdemeanours) and "misdemeanors" (contraventions), depending on the seriousness of the violation of the protected social value. Environmental offences are generally punishable by a fine or imprisonment of up to 10 years. Most environmental criminal offences are punishable even when committed unintentionally or through negligence, and legal persons can be held liable.*

*The Penal Code introduces a separate criminal offence for "serious environmental crime", which causes serious physical injury, death, long-term consequences or large-scale material damage. There is no comparable offence in the French Penal Code, with only the "crime of ecological terrorism" (Article 421-2 of the Penal Code) criminalising environmental damage in its own right. The Environmental Crime Directive is now at a 'high level' of transposition (90%).*

**Leentje Timmerman**, Enforcement Division of the Department of Environment and Spatial Development, Flanders

Leentje Timmerman holds a degree in industrial engineering in the agricultural and food industry and advanced training in safety science for prevention advisor.

She has worked for several years as an environmental inspector and Seveso inspector for the Flemish government and has experience in monitoring compliance and administrative enforcement of environmental legislation and major accident prevention legislation. She also worked for several years as a facilitator for process and personnel planning projects and coordinator of change processes. She currently works as a strategic coordinator at the Enforcement Division of the Department of Environment & Spatial Development of the Flemish government.

**Presentation title: A more resolute enforcement policy through inspections and sanctions**

**Presentation Abstract:** *To prevent the commission of environmental offences from being profitable, the Enforcement Division of the Department of Environment and Spatial Development of the Flemish government puts forward a more resolute enforcement policy within its divisional activities and in the execution of its core tasks.*

*This more resolute enforcement policy, a repressive approach that focuses on both achieving remediation and enabling resolute punishment, is reflected in both inspections and sanctioning by the Enforcement Division.*



*For inspections, the division adopts a graduated approach as a starting point (once warning, once official report with warning, once official report with administrative measure or penalty) with strict deadlines and follow-up. However, for certain risks, target groups or types of violations, more coercive instruments are used immediately. To this end, the Enforcement Division uses the policy lines of the multi-year environmental enforcement programme and the enforcement initiatives from the annual environmental enforcement plan to determine, for each priority and each subject, when an official report is drawn up or an administrative measure imposed.*

*Regarding sanctions, as a result of diligent enforcement, processes are under way to increase the possible fines in function of the financial capacity of large companies and to strengthen the use of the instrument of deprivation of benefits.*

*A preliminary draft Flemish Enforcement Framework Decree was proposed in 2022. This decree provides for a standard regime for remedial measures and gives the fining authority of the Enforcement Division an integrated mission of administrative prosecution and sanctioning. Implementation of this decree will make committing environmental offences even less profitable.*

**Luigi Garruto** is an investigator of the European Antifraud Office (OLAF) and serves on the Unit dealing with Illicit Trade, Health and Environment. Extremely committed to combating environmental crime, he has led multiple international investigations into illegal waste trafficking, smuggling of refrigerant gases and unauthorised plant protection products.

Before being recruited as OLAF investigator in September 2018, Luigi was a Customs Officer and was responsible for the Antifraud and Verification team in the international port of Livorno (Italy). Prior to lead the Antifraud team, Luigi was a Senior Customs investigator responsible for:

- Risk analysis and intelligence tasks related to international trafficking, with specific skills of judicial and tax police.
- Investigations in different fields (environment, drug, tobacco, counterfeiting, smuggling). with a large experience in cross-border investigation concerning waste trafficking. In this regards, Luigi used to carry on joint investigations for several Regional Anti-mafia Directorates, concerning transnational criminal organisations linked to illicit traffic of waste, undervaluation and origin fraud, usury and financial crimes.

Previous to his work at Italian Customs, Luigi worked at a law firm, dealing with criminal and administrative files. Luigi holds a law degree from the University of Pisa (Italy). In the light of his experience, Luigi is firmly convinced that **cooperation** is the key to success.

***Presentation title: OLAF and Environment cases. Enhancing cooperation between administrative and criminal enforcement***

***Presentation Abstract:*** *The European Anti-Fraud Office (OLAF) is the only EU body with direct investigative powers. It was created to investigate cases of fraud against the EU budget or misuse of EU funds.*



EU FORUM OF JUDGES FOR THE ENVIRONMENT  
UE FORUM DES JUGES POUR L'ENVIRONNEMENT

*Our society is undergoing a deep change, with new perspectives that are more lucrative and profitable in terms of cost/benefit, for those who commit crimes. Reading these different perspectives has led OLAF to a major reorganization of the Office to better respond to these "new" challenges: Environment, Consumer Health (food: counterfeit/dangerous, drugs: counterfeit/falsified). All cases characterized by a **supranational dimension** of the crime, in terms of the structure of the criminal organization, the place of commission of the crime (conduct is often fragmented in such a way as to complicate its reconstruction), concurrence with other crimes, money flows.*

*Cooperation as a synonym for efficiency. In a consequential manner, OLAF has extended, even more its network of international cooperation: not only European and non-European Customs, our natural partners, but also other entities (Market Surveillance Authorities, Agencies specialized for environment, health, specialise police forces) with specific expertise in the areas of interest, which would enable an investigative, rapid and effective response (Environment, medicines).*

*The goal is the combination of administrative and criminal investigations.*

*The most important results, in fact, have been obtained when the outcomes of administrative controls have been acquired in judicial proceedings, with obvious benefits. Just few examples: acquisition from bodies in non-EU countries of information and documentary evidence, on-the-spot inspections, raising the threshold of border controls for further activities, early warning system for joint "investigative" activities.*

*Last but not least, seizures of illicit products, dismantling of transnational criminal groups, and establishment of operational networks.*

**Sjimen Roosma**, Human Environment and Transport Inspectorate, Netherlands

Senior Inspector Sjimen Roosma working in the field of combatting environmental crime more than 25 years, nowadays within the Intelligence and Investigation Service of the Dutch Human Environment and Transport Inspectorate. My education background is a university degree in chemistry and environmental studies (Groningen University). This year I was awarded by UNEP (Europe and Central Asia Montreal Protocol Award) for a contribution to have the involved criminal mitigate the potential damage due to the illegal import of F-gasses with a strong global warming potential. The ILT-approach on improving the quality of fuels blended in the Netherlands and exported to low- and middle income countries inspired me a lot. I hope to be able to contribute as well in a similar approach to tackle other issues like prevention of air pollution, especially (ultra) fine particulate matter, by improving the quality of aviation fuels.

**Presentation title:** *'Use of the Dutch legal Duty of Care obligation in improving the quality of gasoline and diesel blended in the Netherlands and exported to low- and mid income countries, a multi intervention approach*

**Presentation Abstract:** *The Human Environment and Transport Inspectorate (ILT) published reports that made clear:*

- *that petrol and diesel blended and exported from the Netherlands to West African countries, contained much higher levels of sulphur, benzene and manganese than is allowed in European petrol and diesel to prevent excessive air pollution,*
- *that used road vehicles exported from the Netherlands to Africa were predominantly of emission quality EURO 3 and partly EURO 4.*

*A third report assessed the above-mentioned findings. High levels of these substances in fuels lead to much higher emission of particulates, SO<sub>2</sub>, benzene and VOC's (Volatile Organic Compounds) than the fuels used in Europe. The use of these fuels in the importing has a detrimental effect on catalytic converters and particulate filters. This gives rise to substantial additional emissions of pollutants.*



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*Several other reports state that these additional emissions lead to reduced air quality and to health problems and contribute to premature deaths, for example in urban areas in West African countries. These reports go on to say that the cost of the damage to health is expected to be much higher than the cost of improving fuel quality.*

*In view of this large share of fuels exported from the Netherlands in the import in West-African countries and the negative impact on health related to the low-quality fuels the ILT started a program on improving the quality of exported gasoline and diesel with the use of the legal 'duty of care' obligation of article 9.2.1.2 of the Dutch Environmental Management Act. Part of the program was the development of a Policy rule<sup>1</sup>, that was formally published to set specifications on sulphur, benzene and manganese the Inspectorate could use for enforcement purposes. Fuels that meet these specifications when exported (e.g. to West African countries) are considered compliant with the duty of care obligation. The Policy rule was challenged by some companies through a civil lawsuit of which the decision was in favor of the ILT. The Inspectorate started an inspection and enforcement campaign in which infringements are open for administrative and criminal sanctions. Especially the threat of a criminal court case supported the effectiveness of the further administrative approach. Recent inspections showed that the specifications of the Policy rule are respected.*

*The Dutch duty of care obligation probably doesn't have its equivalent in other exporting European countries. To get an as much as possible international level playing field, we e.g. closely cooperate with UNEP that hosted an African Petroleum Ministers meeting on cleaner fuel<sup>2</sup>, November 2022, and also cooperate within the Benelux Union in which Belgium and Luxembourg are represented.*

<sup>1</sup> Policy rule on maintaining the quality of petrol and diesel intended for export to low and middle income countries outside the EU, with special reference to the ECOWAs countries 2022 (<https://english.ilent.nl>).

<sup>1</sup> [www.unep.org/events/conference/high-level-african-petroleum-ministers-meeting-cleaner-fuels](http://www.unep.org/events/conference/high-level-african-petroleum-ministers-meeting-cleaner-fuels)

#### **Theme 4 – How to assess, remediate and compensate for the damage incurred?**

**Angeliki Bosdogianni**, Greek Ombudsman

Dr. Angeliki Bosdogianni is Senior Investigator at Greek Ombudsman since 2002 and she is dealing with complains concerning the protection of natural and urban environment, drinking water quality, waste management. Prior to joining the GO she has worked for the firm G. Karavokyris & Partners Consulting Engineers, since 1992, and she contributed to the design of waste water treatment plants, storage dams, hydrologic and environmental impact assessment studies. Dr. Angeliki Bosdogianni received her diploma in Civil Engineer from National Technical University of Athens, her M.Sc. in Environmental Engineering from Von Karman Institute for Fluid Dynamics, (Belgium)), and her Ph.D in Environmental and Public Health Engineer from NTUA.

**Dr. Emilia Liaska** is an Environmental Lawyer graduated from the Law School of Athens. She also has a LL.M in European Law (ULB-IEE, Brussels) and a MSc on Environmental Management & Legislation (Environmental Association for Environmental Management Education, Varese).

She has 32 years of experience in environmental law and management and currently works as a Senior Investigator at the Greek Ombudsman Institution.

Her main interest is the Aarhus Convention which includes access to environmental information, access to documents, public participation in decision making and access to justice. She is also an expert in Environmental liability issues, urban planning, landscape protection, nature protection, International environmental law & conventions, UN SDGs.

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<sup>1</sup> Policy rule on maintaining the quality of petrol and diesel intended for export to low and middle income countries outside the EU, with special reference to the ECOWAs countries 2022 (<https://english.ilent.nl>).

<sup>2</sup> [www.unep.org/events/conference/high-level-african-petroleum-ministers-meeting-cleaner-fuels](http://www.unep.org/events/conference/high-level-african-petroleum-ministers-meeting-cleaner-fuels)





**Presentation title: *The Greek Ombudsman's (GO) role in the implementation of environmental liability legislation***

**Presentation Abstract:** *In Greece, the ELD provisions have not yet received special elaboration because of how misunderstood its operation within the modern administrative mechanism is, and the fact that many stakeholders may even be unaware of its existence. However, Presidential Decree 148/2009 transposing the directive into the Greek legislation remains the main legislative instrument, which establishes an environmental liability regime based on the polluter pays principle, focused on the prevention and remediation of environmental damage. Active citizens can play a very important role in the successful implementation of the ELD directive.*

*The Greek Ombudsman, as a mechanism which contributes to the improvement of the quality of services provided by the public administration and aims at promoting a new administrative culture, can make a unique and crucial contribution in ensuring the implementation of the environmental liability legislation. The power of environmental transparency and the implementation of the Aarhus Convention principles will help implement the ELD regime.*

*This paper will present the remediation and compensation of the damage incurred through three case-studies which have been investigated by the GO and combine the environmental liability with the environmental crime legislation:*

- *the uncontrolled deposition of barrels with caustic waste in Piraeus,*
- *environmental damage caused by the fire broken out on the premises of a private recycling center in Attica,*
- *the restoration of a cave where uncontrolled disposal of municipal waste was taking place.*

**Marco Falconi, ISPRA**

Marco Falconi (ISPRA), graduated in 2001 (environmental science) and 2010 (geology), working in ISPRA, Water and Land ET leader in IMPEL since 2018. Areas of interest are water, soil, landfills and contamination in the broader sense in all environmental matrixes. My experience and the experience of the speakers will be useful to share solutions for a topic (old or irregular landfills) not covered by EU directives yet. A notable accomplishment is a Certificate of Appreciation from UN, for a project delivered in 2018 in Serbia.

Nino Tarantino Special Commissioner for Remediation of illegal Landfills

**Project title: *The inspection, monitoring and remediation of old landfills to prevent environmental damage***

**Project Abstract:** *To cover the importance of managing abandoned landfills and focussing on real projects with real achievements.*

**Dr Dr. Cormac Ó Súilleabháin Cork County Council.**

Cormac has a PhD (Dept. of Civil, Structural & Environmental Engineering, Trinity college Dublin) 2005 an MSC (Civil, Structural & Environmental Engineering, Trinity College Dublin) 2000 and is currently a Senior Engineer with Cork County Council, Ireland.

His areas of interest are Environmental Risk Management, Contractual/Procurement Risk Management, Public Engagement, Project Management.



He oversaw the remediation of the former steelworks dumping site, the successful application for the first (and only) hazardous waste landfill site in Ireland and the remediation of the site. He was previously part of a EC Taxis Expert Mission to Romania & Bulgaria.

**Presentation title: The Remediation of the Steelworks Waste Site on Haulbowline Island, Cork**

**Presentation Abstract:** *The remediation of the East Tip on Haulbowline Island has seen 650,000m<sup>3</sup> of steelworks waste, a negative legacy of the island's industrial past, transformed into a magnificent public recreational amenity for the beneficial use of local residents, the local workforce and visitors alike. With Haulbowline's history as the location of the only steelworks ever to operate on the Island of Ireland this was a unique journey fraught with many challenges. It required the application of innovative and bespoke engineering solutions from project initiation through to completion.*

*Cork Harbour has been utterly transformed by the remediation of the East Tip. This internationally recognised project has delivered an enhanced public realm offering for Cork. In recognition of the high-quality outcome the project has received many accolades.*

**Jomme Desair**, is a researcher at the Research Institute for Nature and Forest (INBO, Belgium). He specializes in political ecology and ecological economics. With a Bioengineering background and currently pursuing a second master's degree in Conflict and Development, he explores the links between nature, the economy, and society. His methodological approaches range from ecosystem services analysis to policy scenario analysis. Central in his research are systems thinking and policy relevance.

**Presentation title: A practical tool to calculate compensations for damage to wildlife**

**Presentation Abstract:** *Restoring damaged nature is a moral obligation which is embedded in legal regulations. In the case ecological damage is deliberately and illegally inflicted by a perpetrator or is caused in the context permitted activities, such damage can be brought to court. Ruling such cases is far from straightforward: is primary remediation possible, at what temporal and spatial scale are compensatory and complementary remediation regarded, etc. Often, part of the damage is irreparable or remedial measures unfeasible. In such cases, monetary compensation can be sought. This evokes questions on who should be compensated and how, and how can an amount be determined. Here we present a research process in which judges, legal experts and ecologists sought to overcome the conceptual, scientific and pragmatic barriers of developing a practical instrument which provides such robust numbers, based on a transparent and adaptable calculation for vertebrate species. We present an indicative list of amounts which can be used in court hearings and rulings, which are often presided by judges who can't be expected to have (or call for) the expertise needed, nor are resources present to conduct complex case-by-case analyses. Much like the indicative list for loss of lives and limbs, judges can use these amounts as a basis for their rulings on compensation for ecological damage. We discuss the strengths and weaknesses compared to existing calculations, and propose ways forward for further applied research as well as recommendations for application.*

**Theme 5 – How to measure enforcement results?**

**Kerry Thomson- Gilroy**, Environment Agency England

Dr Kerry Thompson-Gilroy has a PhD in Behavioural Neuroscience from Cardiff University. She is a Senior Advisor in Enforcement & Waste Crime at the Environment Agency. The team sets the policy and strategic direction for tackling waste crime in England. Dr Thompson-Gilroy leads the 'Data &



Evidence' theme within the team, which makes use of business data, statistical analysis and academic theory to inform strategy and measure enforcement performance.

**Presentation title: Measuring the Effectiveness of our Enforcement against Waste Crime: Using Combined Approaches**

**Presentation Abstract:** *As waste regulation designed to protect the environment expands, so do the lucrative opportunities for criminals including Organised Crime Groups. Evidence suggests that the scale of waste crime continues to increase, while the nature of the criminal activity evolves as quickly as environmental regulation does. Our current measure of how effectively we enforce against waste crime, is a single metric based on a historic profile of criminal activity in the waste sector. However, as the scale and nature of waste crime increases and evolves, we need to consider a new approach. As an organisation the Environment Agency faces multiple challenges in developing an alternative measure of our enforcement against waste crime; by its nature, waste crime is hidden and difficult to record; the breadth of potential criminal activity is huge, such that a single metric gives limited insight; and the nature of the criminal activity changes, so that any measure we develop must be adaptable to a future crime landscape.*

*We are developing a suite of measures that, in combination, we hope will cover the breadth of the waste lifecycle, the broad nature of different waste crime types and give us an indication of the 'hidden' levels of criminality that we are unable to measure directly. By combining data from a National Waste Crime Survey and an estimation of our Deterrence Index, we are preparing for the changing landscape of this environmental crime and how we might measure the effectiveness of our enforcement.*

**Martine Blondeel**, Policy Development and Legal Support Division of the Department of Environment and Spatial Development, Flanders

Martine is a senior Environmental and Spatial Enforcement Policy Expert at the Department of Environment and Spatial Development of the Flemish Government in Belgium. Before this she was the head of the Chief Inspectorate of the Environmental Inspectorate Division for many years. In that role she supervised the coordinating work of several experts in different environmental fields like air, wastewater, waste, waste shipments, noise, odour, ozone depleting substances and greenhouse gasses, soil and groundwater, genetic modified organisms, energy management systems, environmental management systems and Reach Regulation. Before this she was a coordinator-expert in the field of air pollution and odour nuisance control. She has experience as an environmental inspector, as a policy specialist in the field of air and as a science educator. She studied at the University of Leuven and subsequently further degree studies at the universities of Antwerp and of Ghent. She has been involved in IMPEL since 2007 – mainly in the expert teams Industry & Air and Cross Cutting Issues – and in 2021 she was elected as leader of the Cross Cutting Issues Expert Team.

**Project title: A study on indicators to measure enforcement results**

**Project Abstract:** *In 2022, the Department of Environment and Spatial Development conducted a study to expand the set of indicators to measure its enforcement results.*

*A first set of indicators focuses on monitoring and evaluating the implementation of policy enforcement actions. This makes it possible to check whether the policy is being implemented by all the actors involved and whether the commitments are being met by all those involved. A second set of indicators focuses on enforcement activities related to priority environmental and spatial planning topics. In addition to the tried and tested action-oriented indicators, which must make it possible to monitor the deployment of people, resources and instruments for these enforcement actions,*



*attention will now also be paid to monitoring and evaluating the effects of these actions, on the environment and on behaviour, via effect-oriented indicators.*

**Martin Davies** is a senior enforcement policy advisor in the Future Regulation Team in the Evidence, Policy and Permitting (EPP) Directorate.

He has been with Natural Resources Wales and its predecessor for 23 years and has been a senior enforcement advisor in EPP for seven years. Prior to this he spent 16 years in the North Wales Environmental Crime team, with 12 years as a senior investigating officer leading major investigations in waste crime and TFS.

During this time, he spent 18 months in the Environment Agencies National Crime team as a senior investigating officer leading a major cross boundary investigation in Clinical Waste.

He has a background, of serving 12 years military service and 9 years as a police constable. He has a post graduate diploma in Environmental Law.

### **Martyn Evans, Natural Resources Wales**

Martyn is a well-respected and experienced leader with 17 years' extensive involvement in policy, regulation and enforcement in Wales, United Kingdom. As Future Regulation Team Leader, Martyn steers Natural Resources Wales' input on legislative and regulatory change being undertaken by Welsh and UK Government. This has included leading several high-profile strategic and service-level reviews of regulatory systems, processes and frameworks, to advance outcome-focused and risk-based frontline regulation in Wales. Martyn's previous experience includes leading the policy design for several new and novel regulatory workstreams in the renewable energy, water and agriculture sectors, and working on several major environmental crime investigations. In addition, Martyn is undertaking a part time PhD at Cardiff University, using an innovative 'crime script' analysis framework to research the level, construction and organisation of waste crime in Wales.

### **Presentation title: The Green Light: Using environmental data to prevent and deter harm in Wales**

**Presentation Abstract:** *Natural Resources Wales is the principal environmental regulator in Wales. The organisation has an extensive remit, with risk-based regulation and the enforcement of non-compliant or wholly illegal activities underpinning a need to protect, maintain and enhance Wales' natural resources so that people can live better and healthier lives and wildlife can thrive.*

*As an evidence-based organisation, data collection, monitoring and analysis are synonymous with measuring progress and success. The realm of enforcement is no exception. Martyn Evans and Martin Davies from the Future Regulation team, explore the benefits, challenges and learned experience of measuring regulatory performance and enforcement effort in Wales, to inform decision-making.*

*The talk showcases:*

- *How insights into patterns, trends and risk factors pertaining to incidents, non-compliance and illegal activities inform strategic and frontline enforcement.*
- *The impact of data-driven analysis on identifying evolving threats, the effectiveness of different interventions and, when coupled with various socioeconomic factors, the development of evidence-based policy that aims to address underlying causes and behaviours.*
- *How the measurement of compliance and enforcement data promotes transparency, accountability and public trust, through openly reporting key enforcement metrics and promoting public access to enforcement data.*



- *The pressures on the natural environment in Wales and how data are supporting the development of new tools and approaches to prevent and deter harm to the environment, while making resource go further.*

## Breakout Sessions 2

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### **Theme 1: How new techniques can be used to prevent and detect environmental offences?**

**Massimo Planeira, Arma dei Carabinieri**

For Biography see Plenary Session 1.

**Presentation title: Impact of Sustainability in the criminal interests connected to the environmental sector - Focus on CO2 Credits Market**

**Presentation Abstract:** *In light of the ecological transition processes, which are taking place globally, new economic-financial sectors are developing (such as co2 credits or ESG scoring) that have already attracted criminal attentions and need to be investigated with innovative methodologies before they have a significant impact on the environment.*

**Michal Kortiš, Slovak Environmental Inspectorate**

Michal Kortiš is the Head of the Department of Technological Innovations at the Slovak Environmental Inspectorate (SEI).

Michal's career at SEI started in the internal inspector position at the department responsible for the central database of incoming claims as well as the internal compliance system. This position helped him to get a lot of experience in internal processes and daily tasks of SEI inspectors.

In the last 2 years, Michal has been responsible for the implementation of the CAF model. This project is based on continuous improvement in public administration offices in Europe.

In October 2022, Michal took responsibility for a brand new department, the main goal of which is to apply the latest techniques and technologies in the area of environmental protection. The team participates in several interesting projects such as IMPEL NPRI, IMPEL GIEDA, or LAPIA.

**Presentation title: Setting up a new techniques department in Slovakia**

**Presentation Abstract:** *I am glad to introduce you to the Department of Technological Innovations at the Slovak Environmental Inspectorate. Hopefully, I'll provide many valuable insights so you'll get familiar with our mission.*

Topics:

- *Introduction to the Department of Technological Innovations*
- *IMPEL NPRI implementation*
- *Already acquired technical equipment*
- *Examples of activities*
- *Plans and challenges*

*The main goal of the department is to apply the latest techniques and technologies in the area of environmental protection and to provide professional support to our inspectors. Soon, we will be able*



to introduce sophisticated methods such as land surveying by drones (photogrammetry), and managing internal trainings in this field.  
I am looking forward to sharing my vision.

**Federico Filipponi, ISPRA**

Filipponi Federico is a research scientist with a PhD in Earth Sciences (Università di Pavia), working at Italian National Centre for Environmental Crisis, Emergency and Damage Control (ISPRA). His research activity supports decision-making processes related to environmental emergency and risk with Earth observation products and geostatistical analysis. Development of operational environmental monitoring products based on Earth observation satellite data and geostatistical analysis, in order to improve the effectiveness and efficiency of technical-scientific and operational support during environmental damage, emergency and crises. Main activities concern remote sensing data processing, software code development, in-situ data collection, geostatistical analysis, environmental characterization.

**Presentation title: Contribution of Earth observation and geostatistics on information needs related to eco-criminal acts**

**Presentation Abstract:** *Earth observation capacity to monitor environmental disturbances, used together with geostatistical analysis, plays a fundamental role in supporting to detection of environmental offences. Procedures for monitoring and classifying disturbances using satellite Earth observation data have improved over the past years, with the development of many algorithms that exploit dense time series at high spatial resolution. In particular, a significant contribution is offered by recent satellites constellations (e.g. Copernicus Sentinels), whose high revisit frequency, observation scenario and guaranteed continuity encourages the development of operational monitoring services.*

*This contribution illustrates various methodological approaches that have been used to identify a wide range of disturbances, with the aim of to detecting, characterizing and supporting the evaluation of environmental damages. Satellite earth observation represents a valuable tool for the assessment of pre-existing environmental conditions, allowing to produce a posteriori evidences. Synergic use of earth observation data and geostatistics allows to qualitatively and quantitatively assess environmental conditions, prior and after an investigated eco-criminal act. Generated information, needed by regulatory practitioners when investigating eco-criminal acts, helps to specifically characterise nature and gravity, assess spatial extent of the affected area, identify temporal occurrence, and quantitatively estimate variations of specific biophysical parameters. Specific illustrated cases, related to environmental incidents (e.g. responsible for water pollution), violations (e.g. unauthorized ploughing in protected sites) and eco-criminal acts (e.g. illegal forest logging), affecting various environmental matrices like water and biodiversity, demonstrate the capability to identify and map disturbances, supporting to detection of environmental offences.*

**Theme 2: How to make environmental crime unprofitable?**

**Nuno Saavedra (ICNF, Nature Conservation Authority, Portugal)**

Nuno Filipe Garcia Ramos Mêda de Saavedra ended Graduated Studies on Universidade Aberta, currently he is a High Degree Officer of National Coordination Unit of Enforcement, Inspection and Expertise of Nature Conservation and Forests Authority, working since 1998 on the nature protection enforcement, mainly on CITES enforcement group of Portugal. During this period of work, he has provided training to portuguese police environmental units, about wildlife crime and investigation, criminal intelligence techniques and specific methodologies, legislation and



international conventions, mainly CITES, CMS and Birds and Habitats Directive; He has been representing Portugal at EU Wildlife Enforcement meetings. His areas of professional interest are the protection of wildlife and biodiversity, environmental legislation, technologies to support the investigation of wildlife crimes, intelligence and international cooperation combating environmental crimes.

**Presentation title: Glass eel trafficking - cooperation between criminal and administrative authorities**

**Presentation Abstract:** *The presentation focuses on the strict cooperation between criminal authorities and administrative authorities, with their experts, involving several valences.*

### **Giovanni Broussard, UNODC**

Based in Nairobi (Kenya), Mr. Broussard is the Coordinator for Africa of the UNODC Global Programme on Crimes that Affect the Environment. His work focuses on building capacity among national agencies to tackle transnational organized crime in the environment sectors. He previously spent 14 years in Southeast Asia in various functions within UNODC. He has 20 years of experience in the field of project management related to criminal justice, organized crime and law enforcement, including in Afghanistan, Namibia, Macedonia. He holds a PhD in Development studies with focus on Environment, a Master in International Relations with focus on Corruption and an undergraduate degree in Economics with focus on drug markets.

**Presentation title: Transnational cooperation in combating illicit wildlife trade in Asia, Africa and Latin America**

**Presentation Abstract:** Environmental criminal networks benefit from economies of scale and lack of detection during the supply chain. Arrests and prosecution of low-profile associates have little impact on the revenues of the networks. Over the past decade, law enforcement authorities and prosecutors across Africa, Asia and Latin America have put in place formal and informal networks to disrupt the illicit trade and make it less profitable. Some networks have been more successful than others. This presentation will try to explain why and it will provide an overview of some of the most notable forms of cooperation among Member States, supported by UNODC and other international organizations.

### **Michele Viale, Interpol**

Michele is the Operations Coordinator for Pollution and Illegal Mining Crime in the Environmental Security Programme, Illicit Market Sub-Directorate, Organized and Emerging Crime, Executive Directorate for Police Services, Interpol General Secretariat, Lyon.

Lieutenant Colonel from Italian Arma dei Carabinieri, seconded to Interpol since December 2022, appointed as Operations coordinator since mid January 2023. Senior Officer – Chief of investigation team on environmental crimes since July 2012, in charge of pursuing environmental crimes in the fields of natural resources, environmental violations and threats against flora and fauna protected species.

2nd Level Master's degree in Science and Environmental Security, 2012. (University of Rome - La Sapienza) Specializing course addressed to senior police officers for the Italian State Forestry Corps,



Rome 2010-2012. University degree in International and European Law, 2003, (University of Milan - Bicocca) thesis "Free movement of persons in the E.U."

**Presentation title: *Criminal trends in plastic waste market and a coordinated response***

**Presentation Abstract:** *The criminal trends in a global plastic waste sector is in transition. A joint report prepared by the Scottish Environment Protection Agency thanks to INTERPOL and the LIFE SMART Waste project produced a strategic assessment that aims to help authorities to develop strategies to target and combat plastic waste crime.*

*The above mentioned strategic intelligence report highlights how criminals have been exploiting market transformations to grow criminal businesses in countries vulnerable to waste mismanagement. They have been doing so by disposing of plastic waste illegally, taking advantage of confusion in the marketplace, as well as using increased imports of plastic waste to cover the trafficking in other commodities.*

*As an increasing number of countries are adopting approaches towards a more circular economy, where waste becomes a resource, the waste market is expected to continue to show significant changes in the near future. If changes are not well regulated, they may offer opportunities for new criminal businesses to grow, just like it has been observed in the plastic waste sector.*

*A more collaborative and coordinate approach is necessary to better prevent crime in the global waste sector. Plastic waste-related crime is driven in part by structural deficiencies in the waste market, such as limited waste collection capacities in import countries and the shortage of recycling capacities in export countries, affecting the management of domestic waste in both cases. Collaboration between regulators, inspection bodies, enforcement officers, and the private waste sector is essential to achieve appropriate governance of this sector.*

**Theme 5: How to measure enforcement results?**

**Valerie Doyle, EPA Ireland**

BA Mod Chemistry, Dublin University, Trinity College; M. App Science, University College Dublin.

Senior Inspector, Environmental Protection Agency, Ireland.

Areas of interest include Environmental Enforcement, Networking and Collaboration, Performance Management, Inspection and Enforcement ICT systems and Delivering for the Environment.

22 years experience in environmental enforcement within the EPA in Ireland. Instrumental in the implementation of RMCEI in Ireland and responsible for the development of the revised Local Authority Performance Framework. Previously held the position of National Impel Co-ordinator for Ireland.

**Presentation title: *Performance Measurement of Local Authorities Environmental Enforcement***

**Presentation Abstract:** *The EPA has developed Local Authority Performance Framework, which assesses the effectiveness of local authority inspection activities in targeting key environmental issues. Local Authorities play a vital role in protecting the environment and they are responsible for enforcing much of our environmental legislation. The EPA's Local Authority Performance Framework is a national approach to target key environmental issues. The EPA assess 20 priority areas (know as*





*National Enforcement Priorities) to measure how local authority actions are delivering outcomes. Achieving a Strong or Excellent score demonstrates that the local authority has a comprehensive system in place for the detection and follow-up of environmental enforcement activities and that progress was made towards an environmental outcome under that priority.*

*Each National Enforcement Priority is scored according to a four-point scale; Excellent, Strong, Moderate or Limited. Achieving a Strong or Excellent score demonstrates that the local authority has a comprehensive system in place for the detection and follow-up of environmental enforcement activities and that progress was made towards an environmental outcome under that priority. The overall objective is that environmental improvements are achieved for air quality, water quality and waste management. This works builds on the implementation of RMCEI in Ireland since 2006. For further information see 'Focus on Local Authority Environmental Enforcement Performance Report 2021' at this link. <https://www.epa.ie/publications/compliance--enforcement/public-authorities/focus-on-local-authority-environmental-enforcement---performance-report-2021.php>*

### **Amy Porter, US EPA**

Amy Porter, Senior International Advisor for Enforcement and Compliance Assurance at US EPA. Amy Porter is the Senior International Advisor for the US EPA's Office of Enforcement and Compliance Assurance (OECA). Ms. Porter has been at the EPA for 31 years, starting in the chemical safety and pollution prevention office before coming to OECA, where she has been a manager in both the civil enforcement and compliance offices. She also served as the Deputy Chief Sustainability Officer at the White House Council on Environmental Quality in the Obama Administration. Ms. Porter holds an M.A. in Environmental Studies and a B.A. in Political Science and Public Administration.

### **Presentation Title: US EPA Case Study in Using Performance Measures to Drive Program Improvement**

**Presentation abstract:** Timely enforcement is effective enforcement. US EPA has set a long-term performance goal that reflects the commitment of the enforcement program to address noncompliance as expeditiously as possible and reduce the time between identification of violations and return to compliance. To achieve this, US EPA's enforcement office identified the portion of the enforcement process with the most potential for improvement and established a measure with a quantitative target: to reduce number of open judicial cases that US EPA referred to the Department of Justice (DOJ) more than 2.5 years ago and a complaint has not been filed. The measure has enabled EPA to successfully reduce the number of older cases using a number of different tools. This is a case study in using performance measures to drive program improvement.

### **Rob Kramers, Rijkswaterstaat, Netherlands**

Rob Kramers is an international expert and programme manager at the knowledge Centre for the Environment at Rijkswaterstaat in The Netherlands. His organisation is part of the ministry of Infrastructure and Water management.

Primary focus of his team is capacity building and training on environmental themes. With 25 years of experience within IMPEL, Rob contributed on many of the projects. Doing the Right Things (Inspection planning) and the Knowledge and Innovation Centre are some of them. Currently Rob is programme manager for IMPEL's Knowledge and Information Programme and is one of the ambassadors of the IMPEL Review Initiative programme.

### **Presentation: IMPEL IRI programme**



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**Presentation Abstract:** *The IMPEL Review Initiative (IRI) is a voluntary peer review where environmental authorities of IMPEL member countries help each other to improve the implementation of EU environmental law. By having an IRI, the host gets free advice for further improvement of their work and best practices are exchanged around the European community. In the past the IRI was primarily focused on Inspections, nowadays the IRI covers the whole regulatory cycle.*

*The aims of the IRI scheme are to:*

- *Provide advice to environmental authorities seeking an external review of their structure, operation or performance by experts from other IMPEL Member Countries for the purpose of benchmarking and continuous improvement of their organisation;*
- *Encourage capacity building in environmental authorities in IMPEL Member Countries;*
- *Encourage the exchange of experience and collaboration between these authorities on common issues and problems.*
- *Spread good practice leading to improved quality of the work of environmental authorities and contributing to continuous improvement of quality and consistency of application of environmental law across the EU (“the level playing-field”).*

*The IRI is an informal review, carried out by colleagues from IMPEL. It is not an audit. The IRI is intended to enable the environmental authority and the Review Team to explore how the authority carries out its tasks. It aims at identifying areas of good practice for dissemination together with opportunities to develop existing practice within the authority and authorities in other IMPEL Member Countries.*

## **Ukraine session**

### **Mr Ihor Zubovych, Acting Head of the State Environmental Inspectorate of Ukraine.**

Born in 1981. Complete higher education. He graduated from the National Aviation University with a degree in Land Management and Cadastre. In 2008, he received a qualification as a surveyor at the Institute of Land Management and Information Technologies at the National Aviation University. In 2017, he graduated from the National University of Life and Environmental Sciences of Ukraine with a degree in Law. In 2020, he received a degree in Public Administration and Management from the National Academy for Public Administration under the President of Ukraine.

He has been in the civil service since 2009. He held senior positions at the Kyiv Regional State Administration, the Main Department of the State Committee for Land Resources in Kyiv Oblast, the Main Department of the State Land Agency in Kyiv Oblast, the State Ecological Inspectorate of Ukraine, and the State Ecological Inspectorate in Kherson Oblast. He also held the position of Head of the State Ecological Inspectorate of the Southwestern District.

By the Decree of the Cabinet of Ministers of Ukraine of December 2, 2021, he was appointed Acting Head of the State Ecological Inspectorate of Ukraine.

**Presentation title: *Activity of the State Environmental Inspectorate of Ukraine during war and consequences for the environment***



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**Presentation Abstract:** *The presentation is dedicated to an important topic - the impact of the armed aggression of the Russian Federation on the environmental situation in Ukraine. The military aggression has led to significant changes in the work of the State Environmental Inspectorate of Ukraine and this presentation provides detailed information about the activities of the State Environmental Inspectorate of Ukraine during the war and the consequences for the environment.*

*We talk about the establishment of the Operational Headquarters to record and organize information on the damage caused by the armed aggression of the Russian Federation and the amendments to the Regulations on the State Environmental Inspectorate that expand its powers to calculate the damage.*

*Next, we discuss the Methodologies for calculating losses and damage caused to the environment as a result of aggression and point out the role of the Ministry of Ecology and Natural Resources of Ukraine in their development and approval. The methodologies have been used to determine that total losses amount to about €52 billion, including soil, air, and water pollution. These data illustrate the significant impact of armed aggression on the environmental situation in Ukraine.*

*The EcoZagroza initiative is also presented, which serves to record and analyze environmental threats and the impact of military aggression on the environment. It should be noted that the Cabinet of Ministers of Ukraine has approved the procedure for the State Environmental Inspectorate to perform the functions of EcoZagroza.*

*The presentation describes the consequences of the undermining of the Kakhovka Hydroelectric Dam during the armed aggression, showing the overall picture of the impact of armed aggression on the environmental situation in Ukraine.*

*In summary, the presentation reveals important aspects of the impact of armed aggression on the environmental situation in Ukraine and the measures taken to restore and protect it.*

**Ms. Olena Kryvoruchkina**, Member of the Ukrainian Parliament (Committee on Environmental Policy and Nature Management), Deputy Head of the Committee.

Author of more than 40 scientific research works in economic, environment and management, PhD.

Chief coordinator of the Operative Headquarter acting on the basis of the State Environmental Inspectorate of Ukraine.

**Presentation title:** *Ukrainian response and first steps for the environmental protection activity since the beginning of Russian invasion in 2022. Circumstances and intermediate outcomes*

**Presentation Abstract:** *On March 01, 2022 we initiated the establishment of the Operative Headquarter on the basis of the State Environmental Inspectorate of Ukraine. It became its activity as the coordination center among list of the Ukrainian authorities for fixation, documentation and formation the register of the environmental damage and losses.*

*An Expert Working Group was the next step, because we understood the necessity and significance of the internationally recognized methodologies that we could use in the calculations and assessments.*

*Activity of the subgroup of lawyers searching international principles of detecting and compensating of the environmental losses caused by previous military actions led us to the necessity of the Official Appeal of the Ukrainian Parliament to the UN General Assembly to establish Special Environmental Monitoring Mission (SEMM).*

*Intermediate outcomes and needed next steps not only in the making russia pay for all the losses but also how to avoid such catastrophic environmental circumstances in the world in future.*



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**Andrii Moroz**, Secretary of the Science-Expert Council

Mr. Andrii Moroz was chosen as a secretary of the Science-Expert Council of the State Environmental Inspectorate of Ukraine in September 2022 due to his effective activity as a member of the Operative Headquarter that was established on the basis of the State Environmental Inspectorate of Ukraine on the 1st of March, 2022 (in the first days of military Russian invasion). He is also holding a position of the assistant of the Deputy Head of the Committee on Environmental Policy and Nature Management of the Ukrainian Parliament Ms. Olena Kryvoruchkina.

Andrii Moroz has almost 12 year-experience of attorney in law in Ukraine. He is also holding a PhD level in the Criminal Law.

**Presentation title: Enforcement of environmental law implementation and strengthening the activity of the State Environmental Inspectorate of Ukraine**

**Presentation Abstract:** *The war in Ukraine is causing widespread and severe damage to the environment and inflicted both immediate and longer-term consequences on human health, natural ecosystems, damaging and destroying natural resources and the Ukrainian economy and beyond.*

*Among 10 clear points of the Ukrainian Peace Formula announced to the whole world at G7 and G20 by President of Ukraine V. Zelenskyy, together with the environmental protection point there is a point on leading to justice with the necessity to establish Russian war crimes tribunal and mechanism of compensations of all types of damage (including environmental damage).*

*Despite of war, Ukraine is also on its way to the EU membership, so the enforcement of the State Environmental Inspectorate of Ukraine is not limited with the necessity of the implementation of EU environmental legislation, but also added with the necessity of strengthening its activity in environmental damage data collection process and development of the post-war remediation program.*

#### **Maksym Popov**

*Maksym Popov is the Advisor to the Prosecutor General of Ukraine.*

*Since 2011 Maksym has been working as an attorney at law.*

*Since 2015 he became an environmental lawyer and human rights defender. The focus of his work is environmental protection through rule of law principle and litigation: law enforcement in the field of nature reserve fund protection, promoting NGO's access to justice in cases related to the protection of the environment.*

*Since 28 October, 2022 Maksym holds the position of the Adviser to the Prosecutor General and is leading the direction of prosecuting ecocide and environmental war crimes in Ukraine.*

#### **Borys Indychenko.**

*Since 2009, Borys has been working in the Odesa Region Prosecutor's Office. He worked in various positions in districts and regional prosecutor's office of the Odesa region, including as an investigator of the prosecutor's office before then. In 2016-2023, he held the position of head of the prosecutor's offices of the district branch. Since March 2023, he has been the head of the Specialized Environmental Prosecutor's Office (SEPO) of the Ukrainian Prosecutor General's office.*

**Presentation Abstract: tbc**



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