



Cross-Mediterranean Environment and Health Network

CROME-LIFE

The CROME project

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CROME – the concept





CROME facilitated the new E & H paradigm, proposing targeted innovation steps that include:

1. the operational use and demonstration of the validity of **biology-based modeling tools** that allow to mechanistically link environmental exposure to biomonitoring and epidemiological data. This will be done by:

- (a) linking environmental exposure to the biologically effective dose (BED) of xenobiotics at the main target tissues;
- (b) linking biomarker levels in biological fluids to the BED at target tissues; and
- (c) linking target tissue BED with health outcomes. In this way, environment-wide associations with adverse health effects or physiological perturbations will be established and mechanistic hypotheses regarding the mode and/or mechanism of action can be investigated.

2. the operational use of an integrated approach to biomonitoring that combines the use of state-of theart biomarkers with reverse dosimetry and environmental data to reconstruct the effective dose human population is exposed to. The results will allow moving towards an improved environmental health risk assessment in the EU and the world.

3. development of new and validation of existing biomarkers for environmental health risk assessment and environmental human biomonitoring





CROME workflow









Key findings regarding health impact in the study regions - Greece



Recycling plant accidental event











6

Metabolomics and pathway analysis

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Increased levels of unsaturated vs saturated fatty acids, compared to controls \rightarrow cholesterol homeostasis perturbation \rightarrow AhR deregulation



The effect of biomass



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burning in Greece





The effect of biomass



burning in Greece







Monetary impact of health effects

Monetary benefits from CROME interventions



The effect of biomass



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burning in Greece







A tiered measure strategy was proposed and adopted by the Hellenic government in the form of a Joint Ministerial Decree (**KYA 3272, 23/12/2013**) under the title "**Short-term action plans to address air pollution by particulate matter**" among Ministries of Health, Financial, Internal Affairs, Development And Competitiveness, Education And Religious, Administrative Reform And Government - Wellness -Infrastructure, Transport And Networks - Environment, Energy And Climate Change - Public Order And Protection Citizen - Shipping And Islands

- Information of the public
 - Reducing exposure of susceptible groups
 - Avoiding intensive exercise
 - Avoiding effort.....
- Actions for restricting emissions
 - · Reducing traffic emissions
 - Use of telematics systems routes optimization
 - Speed limits
 - More passengers per vehicles
 - Restricted zones......
 - Reducing industrial emissions
 - Shifting into less polluting activities
 - Use of alternative fuels
 - Reducing activity and electricity production
 - Reducing household emissions
 - Reducing energy consumption
 - Use of cleaner energy



Joint Ministerial Decree



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Financial gains



through the CROME intervention







Publications and other dissemination events



Dissemination facts







TV interviews and







22 November 2016 at PONTOS TV where the CROME-LIFE results on the impacts of air pollution in human health and the detrimental effects of biomass burning were illustrated and discussed



On 7 November, 2016 Prof. Milena Horvat (JSI), Slovenian National TV programme, health effect of exposure to mercury in the framework of the CROME-LIFE project Mallorea Actualidad Deportes Economía Opinión Ocio Vida y Estilo Comunidad Mallorea Diario de Pársa Part Fernan Sucseo Medio Ambiente EN DIRECTO Wimbledon/Semifinales: Djokovic - Dimitrov Dado de Mallorea Mallorea

Hemeroteca | Suscribete Clasificados

Diario de Mallorca

Vorresta konca 알 알 알 알 알 입 Jon Gamat Grader

No es una gran idea seguir una dieta rica en pescado azul por su alto contenido en mercurio

Investigador del Consejo Superior de Investigaciones Científicas (CSIC), este doctor en Ciencias Quénicas por la Autónomo de Barcetona distritó rochestenente en la Read Academia de Medicinas de Balcens coltre los efectos de los contarimantes conjunicos persistente en la saludi mañal. La mangreze es distrito Academia de orgânicas como el DDT presentes en su organismo teniendo más hijos", sostieme (455:3041) nos:

I. Olazola, Palma, "Cuáles son los principales contaminartes urgánicos presentes en el medio ambiente de los que no neo podemos sustraero. "Por ejemplo, el DDT utado en el pasado para combatr las plagas de inectos y sus derivados, los PCB (policionobienilos) presentes en los acetes retigerantes de las brancimadores eléctricos, el hexadorobenero usado para la fabricación de disovertes orgánicos, o el inición, un inecticida organocionado. En definitiva, se trata de compuestos con nuchos atomos de cloro en la molécula, circuistarcia que les confere una gran estabulidas en el medio ambientes yos muy difíciles de eluminar. Adertás, son bastante volálites, lo que les pemile progagarse más



Miércoles, 14 mayo 2014

concedió a este diario. B. Ramon

Palma 21/12

Cartelera

Ανησυχία για τα ψάρια της Ελλάδας: Βρέθηκαν υψηλές ποσότητες υδραργύρου





βαίτερι επιβάρυνση σε υδράργυρο πορατηρείται στην Μεσίγιαο Ούλιασσα και διαίτερα στη χώρα μας δπου μετρότριας σε νησιατικό πλεβουσμό που κατανολάνει μεγάλες ποσότητες φαριάν, σόξονουν 2,5 φορίς υψηλότερα το ποσοστά υδραργύρου σε σχίση με τους κατοίκους των υπολοίτων Μεσογιακών εφρίν.

Νεύτες ποι ολοκληράθησαν πρόσφατα για τον υξοάργωρο στα ψάρα και τς επιτιώσες στου Ινήθυσμό, επικαλέστημαν επιστήμονης σε αντέντειδη τίπου με αφορμή την έναρξη του προγράθματος CROKE (Close Meditarinema Environment & Health Hetorich) που έχει ως στόρ την αξακότης των επιτύσεων στη δημάσα υγέα λόγω της διάταις σε χημικάς αυσίας στην Ελλάδα, τη Σύβοξικό, της Τλιδιά και την έποισο.

Συντονιστής του προγράμματος CROME είναι ο αναπληρωτής καθηγητής του Εργαστηρίου



22 November 2016 at PONTOS TV where the CROME-LIFE results on the impacts of air pollution in human health and the detrimental effects of biomass burning were illustrated and discussed



CROME LIFE+



Key global stakeholder events



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Policy impact





On October 5-6, 2016 Prof. D. Sarigiannis (AUTH) presented an invited talk at the workshop: "Waste, health, sustainability: what way forward" in Bonn (Germany) organized by WHO European Center for Environment and Health.

Prof. D. Sarigiannis, based on the outcomes of CROME-LIFE, made clear proposals on waste management policy actions in Europe to ensure health and sustainability in his capacity as WHO advisor on integrated health impact assessment.

This will be used as input to the forthcoming Ministerial Conference of the WHO (13-15 June 2017 @Ostrava, Czech Republic).





Thank you for your attention



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A new perspective to environment-health interactions