**Interventions to reduce pesticide exposure from agriculture sector in Africa**

**Online workshop, 15-17 November, 2021**

**Organziation committee:**

* Samuel Fuhrimann, Martin Röösli, Swiss Tropical and Public Health Institute (Swiss TPH), Basel, Switzerland
* Aggrey Atuhaire, Uganda National Association of Community and Occupational Health (UNACOH), Kampala, Uganda
* Aqiel Dalvie, Centre for Environmental and Occupational Health Research, School of Public Health and Family Medicine; University of Cape Town, South Africa

**Aim:** Aim of the workshop is to discuss recent research about interventions to reduce pesticide exposure from agriculture sector in Africa. On the first day, we will focus on exposure of workers. On the second day, we will address interventions which primarily address reduction of environmental and public pesticide exposure. The third day will be dedicated to different stakeholders’ perspectives and to conduct a synthesis of the presentation.

**Workshop outcome:** A discussion paper about effective interventions and how to upscale local intervention studies on a larger scale to reduce pesticide related human exposure and health risks. The paper will be submitted to a peer-reviewed journal. Workshop participants without conflicts of interests are invited to co-author the paper. The paper will include summarize the workshop discussions. Ideally, the workshop fosters collaboration across researchers and stakeholders across Africa and beyond.

**Format:** The workshop will be a mix of presentation, breakout group discussions and plenary discussions. In the *break-out group discussions*, input for the discussion paper will be prepared. We will apply an adapted Delphi approach. To stimulate the discussion we will start with 2-4 polls. Then discuss a few leading questions in 4 to 5 break-out groups, reconvene and repeat the polls. The minutes from each break-out groups and the results of the poll will be used to write a paper draft.

**Target group:** Everybody interested in the topic is welcome to participate. The workshop is suitable for researchers, national or local authorities and NGOs.

The study on pesticide interventions including this workshop is funded by Swiss State Secretariat for Education, Research and Innovation (SERI).

**Registration:** no cost registration until 31.10.2021 at <https://swisstph.wufoo.com/forms/mcwp2li1f19ftd/>

**Monday, 15. Nov. 2021**

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| **Time** (GMT+2) | **Agenda** | **Content** | **Presenter** |
| **Interventions to reduce occupational pesticide exposure** Chair: Aggrey Atuhaire | | | |
| 9:45-10:00 | **Welcome** | *Welcome Aqiel, Martin*  *Overview chair, and workshop* | Aqiel Dalvie, Martin Röösli, Bilateral SA-CH Chairs in Global and Environmental Health. |
| 10:00-10:15 | **Setting the scene: research** | *Overview on pesticide research in Africa: a literature review* | Samuel Fuhrimann, Swiss TPH |
| 10:20-11:00 | **Setting the scene: reality in the field** | *Presenting raw/crude realities of unsafe practice, type of problems in the occupational sector* | Erik Joers, University of Southern Denmark |
| 11:00-11:15 | **Break** |  |  |
| 11:30-11:45 | **Mixed method stakeholder survey** | *A mixed method qualitative study to explore the experiences of African agricultural stakeholders on interventions to reduce pesticide exposure in farming* | Martin Röösli |
| 11:45-12:30 | **Discussion** | *Lead questions:*   * *How relevant are health risks from pesticide for pesticides applicators* * *What are triggers for initiating research projects?* * *What should be the occupational health priorities?* * *Are the public health priorities reflected in the on-going research* * *Most pertinent realities to be solved for occupational health* |  |
| 12:30-14:00 | **Lunch break** |  |  |
| Chair: Aqiel Dalvie | | | |
| 14:00-14:15 | **Plenary Discussion** | *Repeating polls* |  |
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| 14:15-15:00 | **Case study I:** | *Effect of information access interventions on reduction of pesticide exposure among smallholder farmers in Uganda: a cluster randomized trial* | Atuhaire Aggrey, Uganda National Association of Community and Occupational Health (UNACOH) |
| 15:00-15:30 | **Break** |  |  |
| 15:15-16:00 | **Case study II** | *Risk perception and behavior in Egyptian adolescent pesticide applicators: an intervention study* | Diane Rohlman, College of Public Health, Iowa |
| 16:00-17:00 | **Group discussion followed by plenary exchange** | *Lead questions:*   * *What is the risk perception of workers* * *Barriers for improvements* * *Promoters/Facilitators* * *Trade-offs* * *Recommended measures for the future* * *Towards pesticidovigilance (similar like* pharmacovigilance)*: do we have the tools to monitor occupational pesticide exposures related health outcomes in vulnerable populations?* | all |
| 17:00-17:30 | **Selection of pesticides to reduce human and environmental health risks** | *A global guideline and minimum pesticides list (Lancet paper)* | Paul C. Jepson, Integrated Plant Protection Center, Oregon State University, Corvallis, |

**Tuesday, 16. Nov. 2021**

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| **Time** | **Agenda** | **Content** | **Presenter** |
| **Interventions to reduce environmental and public pesticide exposure**  Chair: Samuel Fuhrimann | | | |
| 9:30-10:00 | **Setting scene** | What are the problems for the environment and the population from agriculture pesticides in Africa? Bad examples, most pertinent problems to be solved | James Dabrowski, Freshwater Research Centre, South Africa |
| 10:00-10:45 | **Lessons from the field** | Lessons from pesticide studies in the rural Western Cape: Implications for interventions | Aqiel Dalvie, UCT |
| 10:45-11:00 | **Break** |  |  |
| 11:00-11:30 | **Case study III:**  **Intervention study on environmental and public exposure reduction** | Case Study of a pilot intervention: Training Agricultural Extension Officers to impact pesticide safety knowledge amongst small scale women farmers | Saloshni Naidoo, University of KwaZulu-Natal |
| 11:30-12:30 | **Group discussion followed by a plenary exchange** | *Lead questions:*   * *What are the ecological research priorities?* * *How can the broad knowledge in ecological research inform public health?* * *What are the public health research priorities* * *Research gaps in general* | all |
| 12:30-14:45 | **Lunch break** |  |  |

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| Chair: Aqiel Dalvie | | | |
| 14:30-14:45 | **Plenary Discussion** |  |  |
| 14:45-15:30 | **Environmental pesticide exposure measurements in South Africa** | Current pesticide use and exposure in the rural Western Cape: results of CapSA study | Samuel Fuhrimann, Swiss TPH |
| 15:30-16:00 | **Case study IV:**  **Intervention study on environmental and public exposure reduction** | Approaches to reduce occupational and environmental pesticide exposures | Berna van Wendel de Joode, Universidad Nacional de Costa Rica |
| 16:00-16:15 | **Break** |  |  |
| 16:15-17:00 | **Group discussion followed by plenary exchange** | *Lead questions:*  *• Most pertinent realities to be solved for the environment and public exposures?*  *• Which interventions are known to be effective?*  *• Which interventions should be addressed in research?*  *• Towards pesticidovigilance: do we have the tools to monitor pesticide exposures related ecological and public health outcomes low- and middle-income settings in Africa?* | all |
| 17:00-17:30 | **Lessons from the fields** | Impact of pesticide exposure on children’s health in a California agricultural community | Brenda Eskenazi, Center for Environmental Research and Children’s Health, Berkeley Public Health |

**Wednesday, 17. Nov. 2021**

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| **Time** (GMT+2) | **Agenda** | **Content** | **Presenter** |
| **Stakeholder perspectives and policy measures** Chair: Aggrey Atuhaire | | | |
| 9:30-10:00 | **The regulator perspectives** | What type of evidence is needed from intervention studies for the regulation | Ivy Saunyama, Food and Agriculture Organization of the United Nations |
| 10:00-10:30 | **Use of illegal pesticides** | Street Pesticides: Intervention Complexities and Opportunities | Andrea Rother, UCT |
| 10:30-10:45 | **Break** |  |  |
| 10:45-11:15 | **Policy and networks in Africa** | How policy should reduce occupational and environmental exposures to pesticides | Leslie London, UCT |
| 11:15-12:00 | **Group discussion** | *Lead questions*   * *Status of policies* * *Are there missing policies* * *Implementation and enforcement of policies* * *Towards pesticidovigilance: how can policy contribute?* | all |
| 12:00-13:00 | **Plenary discussion** |  | all |
| 13:00 | **Closure of meeting** |  | Aqiel Dalvie, Martin Röösli |