PMAC PRINCE MAHIDOL AWARD CONFERENCE 2023

PS 2.1

FOOD SYSTEM TRANSFORMATION: CHALLENGES (PART 1)

| BACKGROUND

We are at a cross-roads: our largely dysfunctional food productions systems are responsible for about one quarter of all anthropogenic greenhouse gas (GHG) emissions; land use change is now the primary driver of biodiversity loss and infectious disease emergence; land degradation has reduced the productivity of one quarter of the global land surface. Over the past 5 decades, there has been a 300% increase in volume of agricultural production dependent on animal pollination and up to 75% of global food crops are dependent on animal pollination. Yet, pollinator declines alone contribute to annual losses ranging between USD $235 and $577 billion (IPBES 2017). Plastic pollution has increased tenfold since 1980, and its impacts come right back to human populations through the food chain.

Moreover, the loss of diversity from agro-food systems is increasing the vulnerability and reducing the sustainability of many production systems and has had negative effects on human health. While there have been significant increases in food production through the introduction of higher yielding uniform varieties and breeds, loss of genetic diversity in production systems through monocropping of uniform crop varieties or animal breeds has led to instances of large production losses and, in some cases, has had significantly negative health consequences. Loss of diversity has also resulted in the reduced provision of regulating and supporting ecosystem services, requiring additional chemical inputs and creating negative feedback loops (WHO, 2020).

The large and growing body of scientific evidence at this nexus will be instrumental to informing the format and structure of this session.

| OBJECTIVES

The global food system is the leading driver of biodiversity loss, a significant driver of climate change and at the heart of many communicable and noncommunicable diseases. The core aims of these sessions will be to answer the following broad questions: What are the primary (environment/climate/health) challenges posed by our dysfunctional global food system? What are some of the key entry points to overcome them?

The "Food System Transformation" session will be divided into two parts. Part 1 (Parallel Session 2.1) will emphasize the need for urgent food system transformation at the biodiversity, climate and health nexus and Part 2 (Parallel Session 2.4) will highlight opportunities to overcome them.

Panelist / Panelist / Panelist

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