UNICAM AND THE SUSTAINABILITY GOALS



UNICAM conference Angkor Paradise Hotel, Siem Reap 27-29 August 2018



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UNICAM AND THE SUSTAINABILITY GOALS

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The UNICAM project

Pesticides and sustainable agriculture

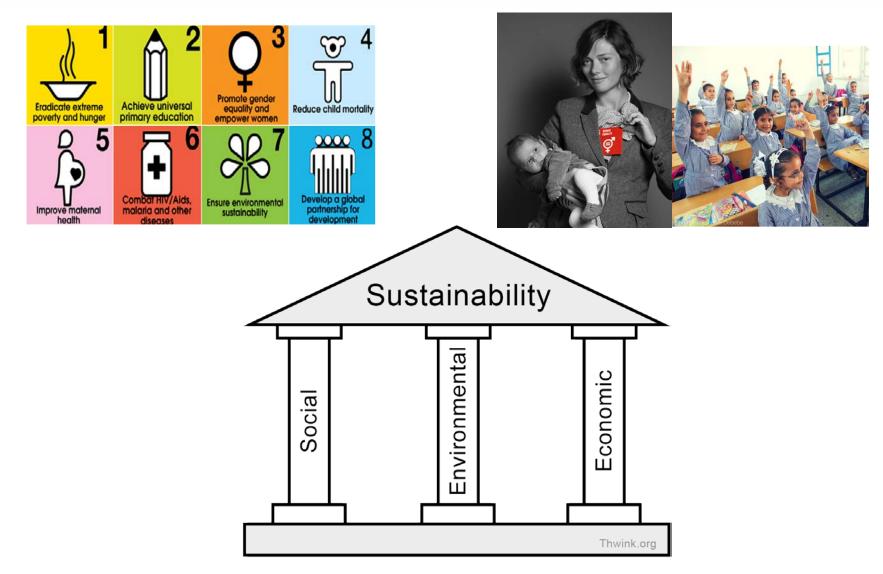


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A/RES/70/1 United Nations Distr.: General **General Assembly** 21 October 2015 NO Poverty 2 ZERO HUNGER GOOD HEALTH And Well-Being QUALITY Education GENDER EQUALITY CLEAN WATER AND SANITATION 1 3 4 5 6 AFFORDABLE AND CLEAN ENERGY DECENT WORK AND Economic growth **9** INDUSTRY, INNOVATION AND INFRASTRUCTURE **10** REDUCED INEQUALITIES SUSTAINABLE CITIES AND COMMUNITIES RESPONSIBLE CONSUMPTION 8 12 AND PRODUCTION 14 LIFE BELOW WATER **17** PARTNERSHIPS FOR THE GOALS 13 CLIMATE ACTION 15 LIFE ON LAND 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

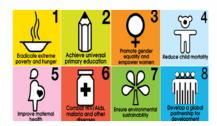




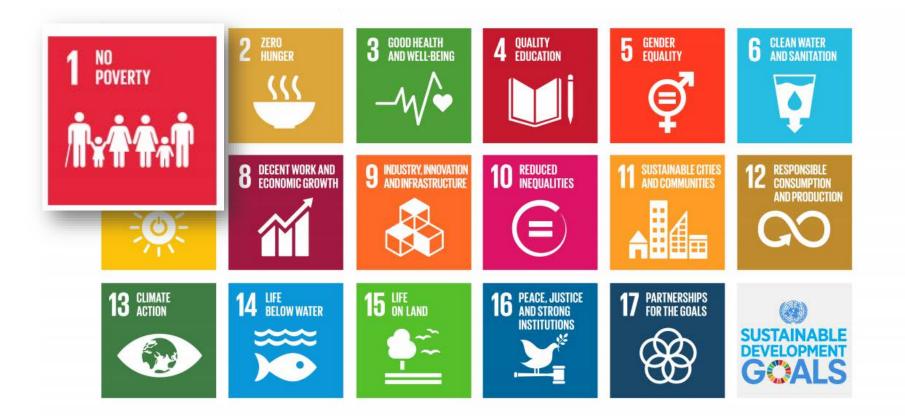


Our world today

Information and Violent extremism, communication technology terrorism, forced and global displacements interconnectedness Scientific and technological Natural disasters, natural resources depletion, innovation environmental Hundreds of milions of people degradation have emerged from extreme poverty Gender inequality, young unemployment Access to education has greatly increased Poverty







Goal 1. End poverty in all its forms everywhere





Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture





Goal 3. Ensure healthy lives and promote well-being for all at all ages





Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all





Goal 5. Achieve gender equality and empower all women and girls





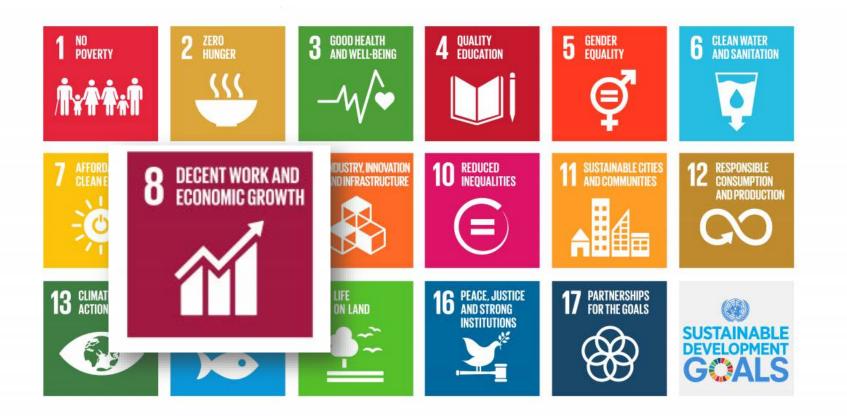
Goal 6. Ensure availability and sustainable management of water and sanitation for all





Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all





Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all





Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation





Goal 10. Reduce inequality within and among countries





Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable





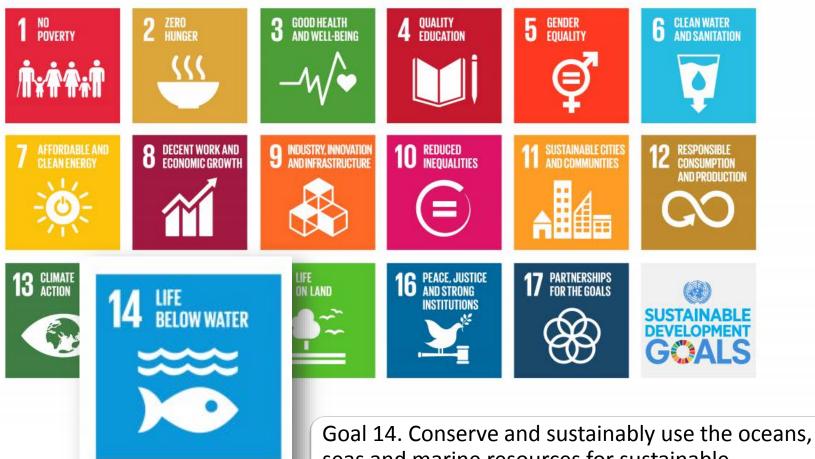
Goal 12. Ensure sustainable consumption and production patterns





Goal 13. Take urgent action to combat climate change and its impacts



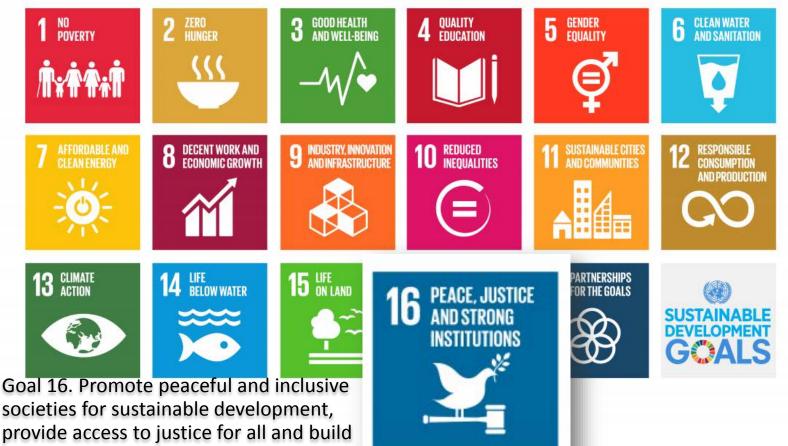


Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development







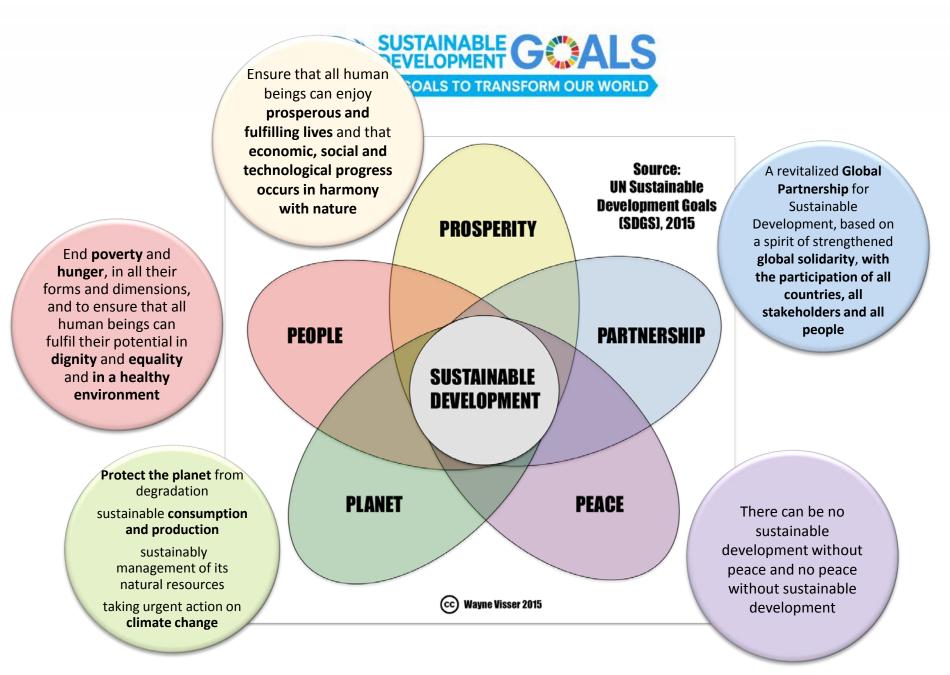


effective, accountable and inclusive institutions at all levels





Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development



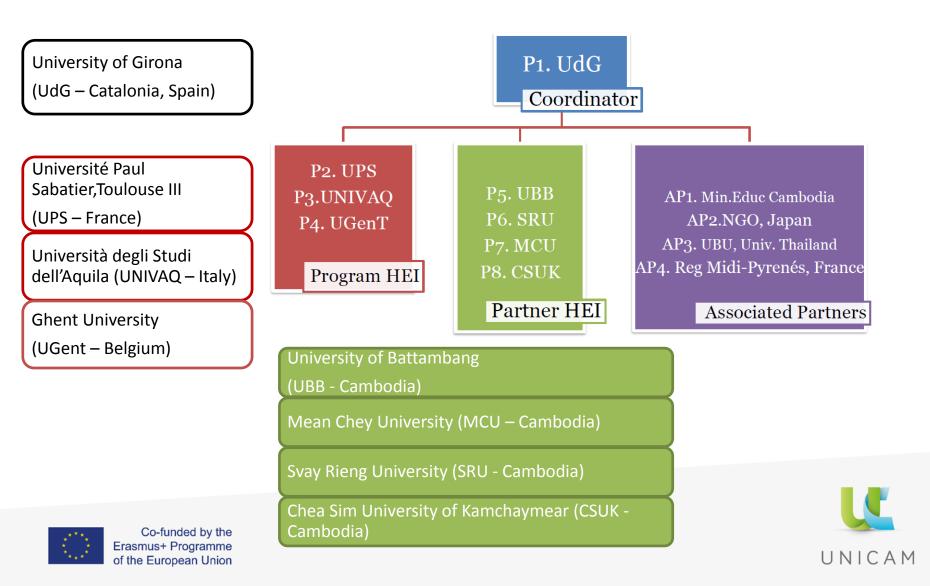


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Cooperation for innovation and the exchange of good practices

Capacity building in the field of education



2. The UNICAM project Cooperation for innovation and the exchange of good practices Capacity building in the field of education

KA2 – Cooperation for innovation and the exchange of good practices – Capacity Building in the field of Higher Education

E.1. Why does the consortium wish to undertake this project?



a) To improve the higher-education quality and its relevance for the labour market and society of Cambodia as well as the Southeast Asian Nations (ASEAN) through offering Master's Programmes in Sustainable Agriculture (MSA)

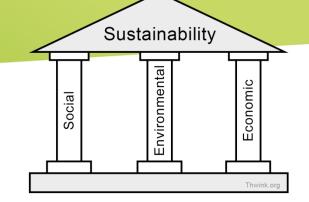
b) To build capacity of the young universities in Cambodia by providing advance training courses (ATC), collaborating and networking with appropriate national and international partners to be a **multiinstitutional research and education centre**.



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2. The UNICAM project Cooperation for innovation and the exchange of good practices Capacity building in the field of education

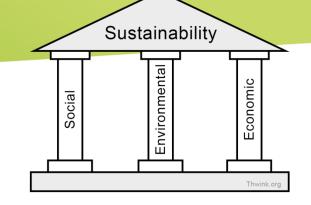








Cooperation for innovation and the exchange of good practices Capacity building in the field of education





Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

ENVIRONMENTAL TARGETS

The MSA is willing to contribute to implementing **resilient agricultural** practices **that increase productivity and production**, that help **maintain ecosystems...** and that progressively **improve land and soil quality**

ECONOMIC TARGETS

We are **investing**, through international cooperation in **equipment** to carry out research and training on sustainable agriculture



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Cooperation for innovation and the exchange of good practices <u>Capacity b</u>uilding in the field of education

> KA2 – Cooperation for innovation and the exchange of good practices – Capacity Building in the field of Higher Education

F.2. Project activities and Methodology



Implementation of a master in sustainable agriculture Analyse different models of curriculum Evaluate Develop the program of a master Implemented as pilot programme Implemented as pilot programme



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Cooperation for innovation and the exchange of good practices Capacity building in the field of education



Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



...ensure access of Cambodian citizens living in rural areas to higher education ENVIRONMENTAL TARGETS

Training the trainers to ensure that they acquire the knowledge and skills needed **to** promote sustainable development **ECONOMIC TARGETS**

Sustainability

Environmenta

Social

Economic

...upgrade education facilities...

Funding scholarships for UNICAM master students to perform the master thesis in Europe.





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2. The UNICAM project Cooperation for innovation and the exchange of good practices Capacity building in the field of education





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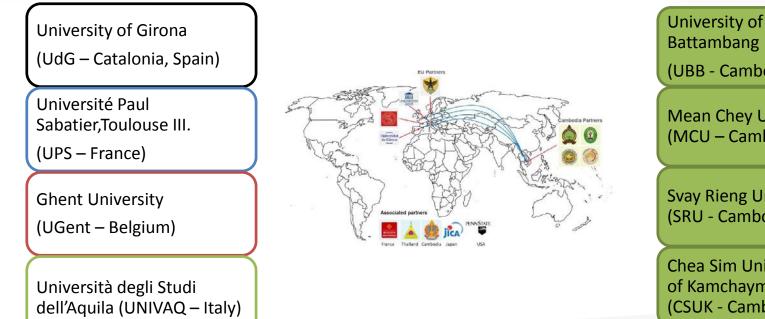


2. The UNICAM project Capacity building in the field of education



UNICAM Partnership Sustainable is for а Development, based on a spirit of strengthened global solidarity, focused on the needs, in terms of education, of the rural zones of Cambodia, with the participation of many countries and also the support, as associated partners, of Japan, USA...









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Cooperation for innovation and the exchange of good practices Capacity building in the field of education

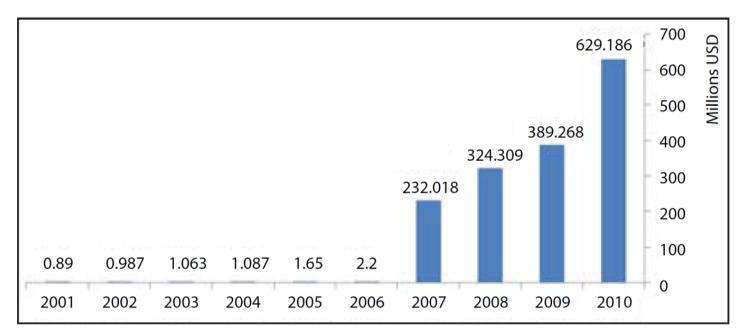
Pesticides and sustainable agriculture



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Cost of Agricultural Pesticide Imports 2001-2010 in Cambodia



Source: FAO 2012

Kimkhuy and Chhay, 2014. Development Research Forum Synthesis Report.





UN experts denounce 'myth' pesticides are necessary to feed the world





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Report of the Special Rapporteur on the right to food

II ADVERSE IMPACT OF PESTICIDES ON HUMAN RIGHTS B. Environmental impact

Pesticides can persist in the environment for decades and pose a global threat to the entire ecological system upon which food production depends.

Excessive use and misuse of pesticides result in contamination of surrounding soil and water sources, causing loss of biodiversity, destroying beneficial insect populations that act as natural enemies of pests and reducing the nutritional value of food.



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Report of the Special Rapporteur on the right to food

II ADVERSE IMPACT OF PESTICIDES ON HUMAN RIGHTS B. Environmental impact

Pesticides contaminate and degrade soil to varying degrees.

In China, recent studies released by the Government show moderate to severe contamination from pesticides and other pollutants on 26 million hectares of farmland, to the extent that farming cannot continue on approximately 20 per cent of arable land

Caixin Online, "China's tainted soil initiative lacks pay plan", 6 August 2016, available from http://english.caixin.com/2016-06-08/100952896.html.



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Sulfoximine pesticides impact bumblebee colony fitness. Nature. August 16, 2018

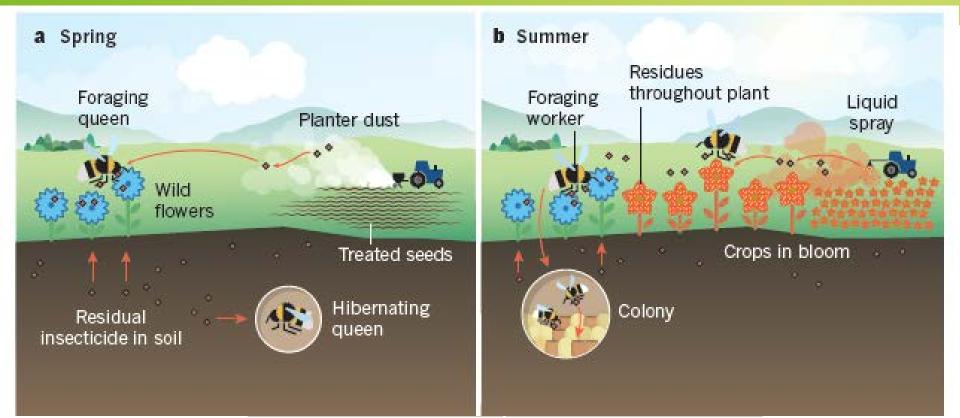


Figure 1 | **Routes of bumblebee exposure to insecticides.** Siviter *et al.*³ have investigated how exposure to the insecticide sulfoxaflor affects bumblebee colonies, using a combined laboratory–field protocol. There are multiple potential routes of exposure to systemic insecticides. **a**, In spring, insecticide-treated seeds are sown. Contaminated dust from seed planters drifts across fields, and lands on wild flowers (insecticide residues are indicated by red diamonds, routes of spread by red arrows). Residual insecticide in the soil from the previous year might affect queen bumblebees hibernating in the soil, or be taken up by wild flowers, leading to exposure of foraging queens that consume contaminated nectar and pollen. **b**, In summer, crops grown from treated seeds bloom, producing contaminated nectar and pollen (red stripes). Spray treatments can increase insecticide levels on crops and on nearby wild flowers. Foraging worker bees ingest insecticide-laced nectar and pollen from both treated crops and contaminated wild flowers^{17,18}, and are exposed through contact with sprayed plant tissue when foraging on crops. Workers take insecticide-laced pollen and nectar back to the colony, where it is ingested by larvae (not shown).



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Babbity Bumble



A bumble bee that frights a family in *The Tale of Mrs Tittlemouse*, by Beatrix Potter, 1910.

https://en.wikisource.org/wiki/The_Tale_of_Mrs._Tittle mouse



Decline of bees and other pollinators could worsen global malnutrition



Chaplin-Kramer er al. 2014. Global malnutrition overlaps with pollinator-dependent micronutrient. production. *Proceedings. Biological sciences / The Royal Society. 281* (1794).









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