Innovation for Change

Young Talents | Real Challenges | New Tech

NIT.RED

"Data driven N_2O reduction"
Challenge: N_2O emissions from agriculture
Proposed by: UNIDO

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- **Problem Statement and Solution proposed**:
  Last year was the hottest year on record. This rise in global temperatures has had several consequences through climate change. Green House Gas (GHG) emissions have been identified as the root cause of global warming.
  Nitrous Oxide (N_2O) is one of the major contributors; while it is the third GHG by amount of emissions (behind CO_2 and CH_4) accounting for 7% of emissions, it has a higher capacity at trapping heat within our atmosphere (298 times that of CO_2) and a longer atmospheric life. It took 50 years to act to reduce carbon emissions and we believe now is the right time to tackle the problem of N_2O.
  The main source of anthropogenic N_2O emissions is agricultural activity, where the inefficient usage of fertilizers accounts for 66% of these emissions. The increase in availability of these fertilizers and increasing food demands are feeding this cycle of emissions.
  NIT.RED aims to raise awareness about Nitrous Oxide emissions and encourage attempts to reduce its emissions. To achieve this goal, we are trying to create collective knowledge by bringing the right stakeholders together. This stakeholder network will share data acquired through measurements and surveys, while also sharing knowledge on interventions which could reduce its emissions.
  To improve communications between stakeholders and showcase the vast amount of insight that could be gained by putting data from different partners together, NIT.RED is creating a tool to visualize the data, showcase correlations and, ultimately, help share knowledge and environmental responsability among the different stakeholders.

- **Main to do before June 20th:**
  interviews and investigation of main key factors for partnerships with community stakeholders – creation of web platform – definition of new possible sensing tools

- **Action plan for next 20 months:**
  data aggregation – software development – introduction of regulation, policies and good

practices – standards creation – monitoring & evaluation programme – “green marketing” – network development

- **Vision for the future: 20 years ahead:**
  raise awareness about other environmental topics through the community – intervention – public awareness and education programs – services for producers – consultancy – labelling & certifications – crop cost management – traceability – sector change – training on GAPs (Good Agricultural Practices) – flexible approach – demand for GHG-free products – network consolidation