

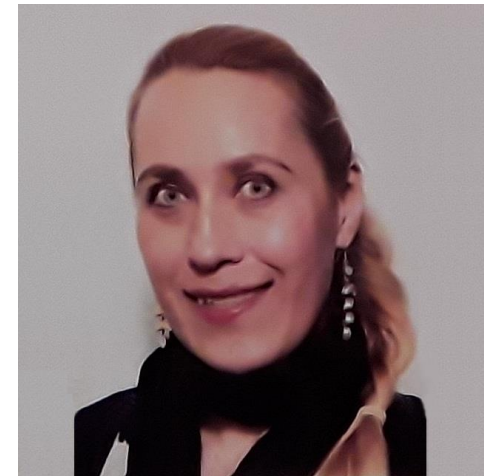


United Nations Climate Change  
Global Climate Action



# Sectoral **A**ctivity data for Greenhouse gas **E**missions calculations (**SAGE**)

*by Olia Glade,  
Director for MRV Systems,  
Greenhouse Gas Management Institute*



# Many Compilers face Activity Data problems:

**Before calculating emissions, we need to obtain ACTIVITY DATA, which means:**

The category (2006 IPCC, CRF)

Where the data come from (the source reference), when it was collected, and by whom

The level of aggregation/coverage (national, or covering an island, a province etc..)

Data values and units of measurement

The uncertainty

Additional parameters that affect emission calculations from fuels:

Density

Calorific value

Carbon content

Water content

**Were the data reviewed and approved? By whom? When? Were there any comments?**

**How do we deal with data gaps?**

**What about data analysis? Building indicators for NDCs and policy reports?**

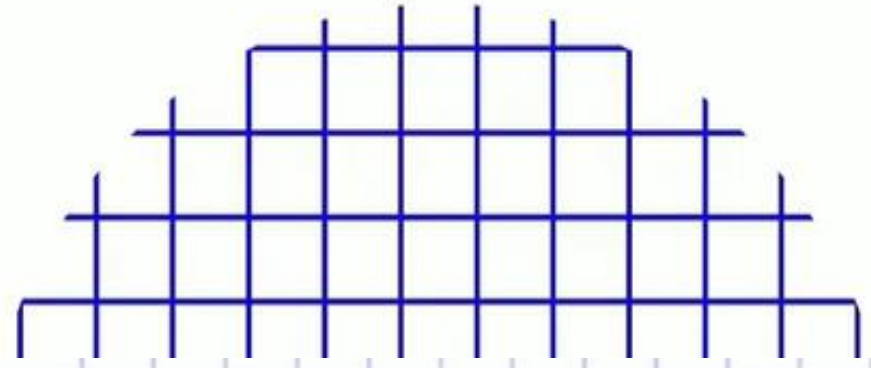
# WELCOME TO SAGE Introduction



# Purpose of SAGE

- SAGE is a greenhouse gas inventory **data collection tool to support national climate measurement, reporting, and verification (MRV) systems**, especially in developing countries, through robust data collection, intelligent processing, and storage.
- SAGE is fully compatible with the 2006 IPCC guidelines for national greenhouse gas inventories and was developed to support governments in collecting activity data to ultimately meet the reporting requirements under the Enhanced Transparency Framework of the Paris Agreement.

# What does SAGE do?...



**Enter & Track Activity Data  
(AD)**

Recalculate units

Set uncertainty following 2006  
IPCC logic

Apply sector-specific features



**Find & Fill  
Data gaps**



**Adjust menus  
to national  
circumstances**



**Perform  
Data  
analysis**



**Calculate  
Indicators**



**Support data  
Review &  
approval process**

# Examples of Sector-specific features

## ■ Energy:

- Enter the data for the Reference approach and calculate the Apparent Fuel Consumption
- Sectoral approach: top-down or bottom-up data entry

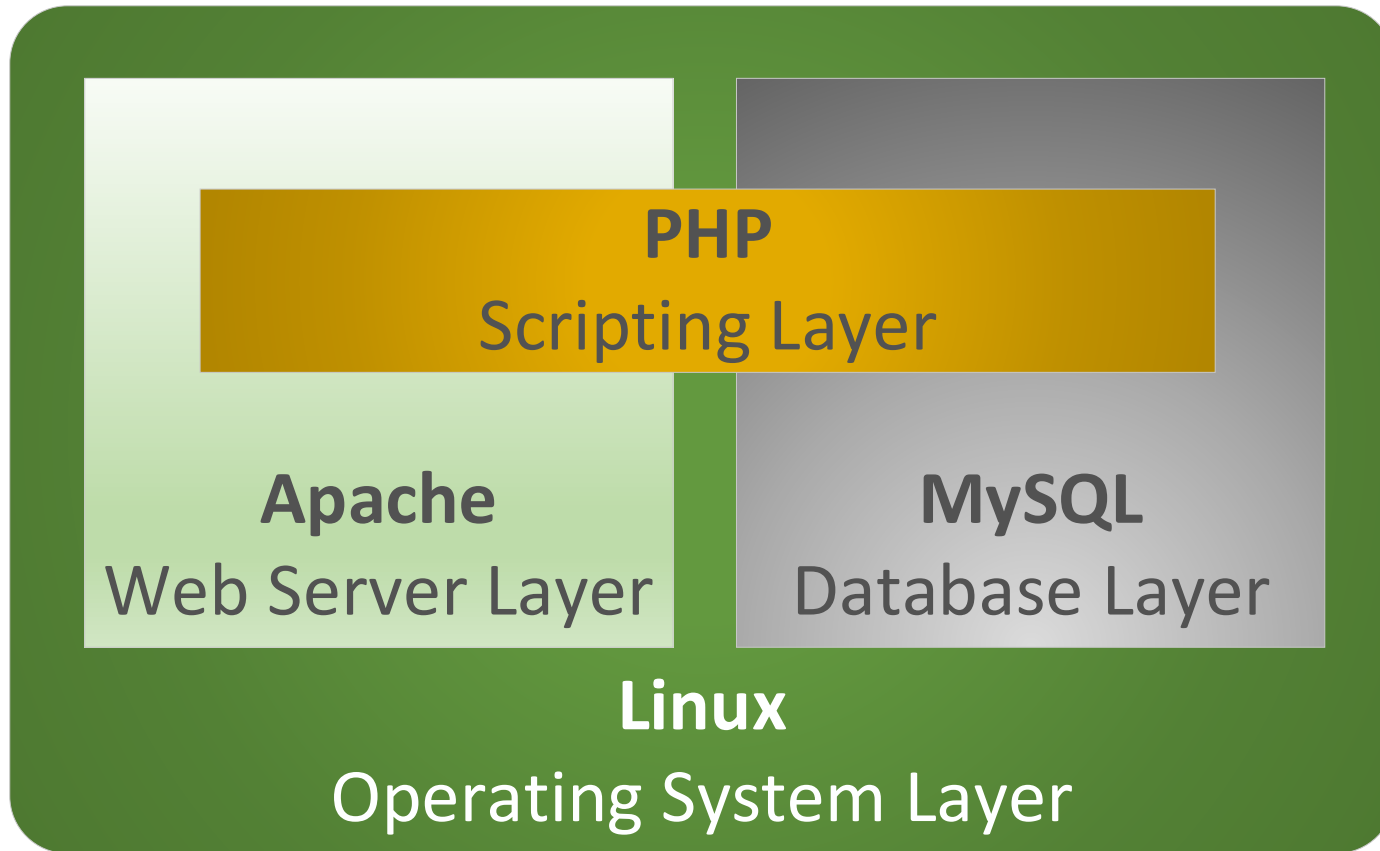
## ■ IPPU:

- Blend calculator for F-gases
- Calculating banks

## ■ Waste:

- FOD model
- Data entry by bulk and by the composition
- TOW calculation

# Inside the SAGE tool

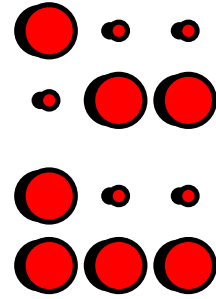
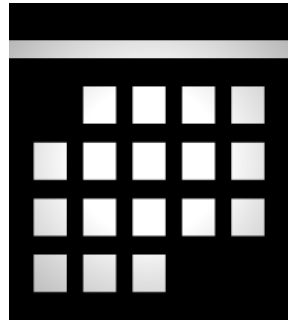


For calculations, SAGE uses:

- business logic described in the 2006 IPCC Guidelines,
- basic material science and engineering data,
- statistical formulae.

- SAGE is a **web-based** tool that can be run on a server of your choice
- It can be **accessed by multiple users** simultaneously
- It accepts data entries through **the web form**, from **Excel files** (for time series), or by **modifying data collections** previously created in SAGE and approved for publication and external use

# Sequence of work with SAGE



Create collection (a placeholder)

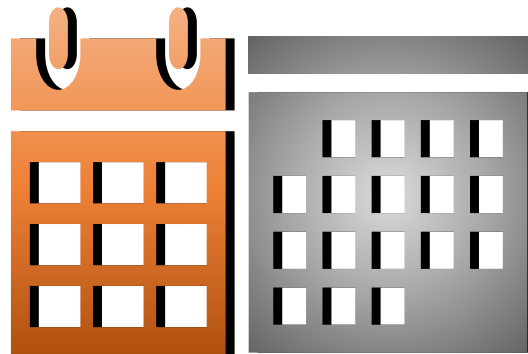
Enter or Load the data

Compare with the previous collections (if exist)

Find & fill in the data gaps

Analyse the time series

Go through the review & approval process & publish





# SAGE and IPCC software

SAGE and IPCC are DIFFERENT, but COMPLEMENTARY tools, it's a good idea to use both tools for producing GHG inventories

SAGE is for storing and processing activity data and metadata so that it could be entered in the IPCC equations; it also performs AD analysis and fills the data gaps

IPCC software is for calculating emissions from the processed AD, processing emissions, and creating reports

SAGE supports the IPCC tool by providing the appropriately processed AD as required by the IPCC tool in the correct form and units

It is planned to build an XML bridge between the SAGE and IPCC tool to provide for the automatic AD upload

BOTH tools are distributed free of charge!

AD Collections

- + Dashboard
- + Explore
- + Compare
- + **Annual AD (23)**
- + Manage all
- + Draft (23)
- + Review (0)
- + Approve (0)
- + Publish (0)

4.A T1,2,3 - Add

List

Add

Export

Import

Changes

Info



4.A

4.B

4.C

4.D

4.E

ID:

Annual AD collection:

Select

Category:

4.A > Solid Waste Disposal

Waste site type:

Any

Climate zone:

Select

Aggregation:

National

Statistics quality:

Unknown

Tier:

T1

State:

draft

Add

Cancel



THANK YOU!