CRSC Sustainability Metrics Platform Project

CRSC Meeting, Toronto, ON

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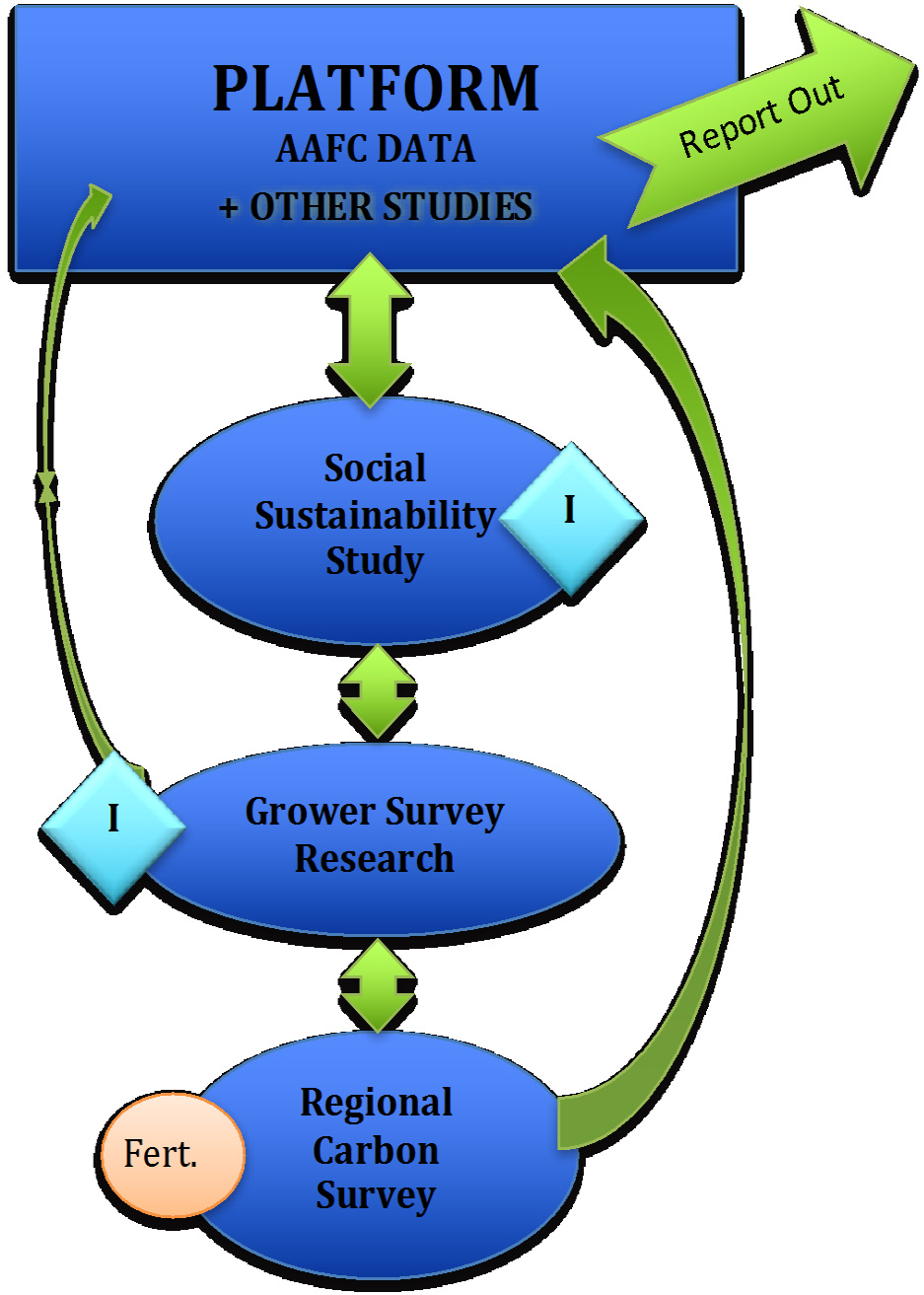
Project Objective

- Establish a definitive, reporting platform on Sustainability Metrics
  - National in scope
  - Includes all Canadian “grains”
    - Wheat, Durum, Canola, Barley, Oats, Field Peas, Lentils, Corn, Soybeans, Flax
  - Using regional or ‘macro’ data

Project Outline

- Four Inter-related Projects

1. Platform Development
2. Carbon LCA
    1. Fertilizer study
3. Social Study
    1. Indicators
    2. Laws and Regulations
4. Grower Survey
    1. Environmental Indicators
    2. Economic Indicators
    3. Supporting Data

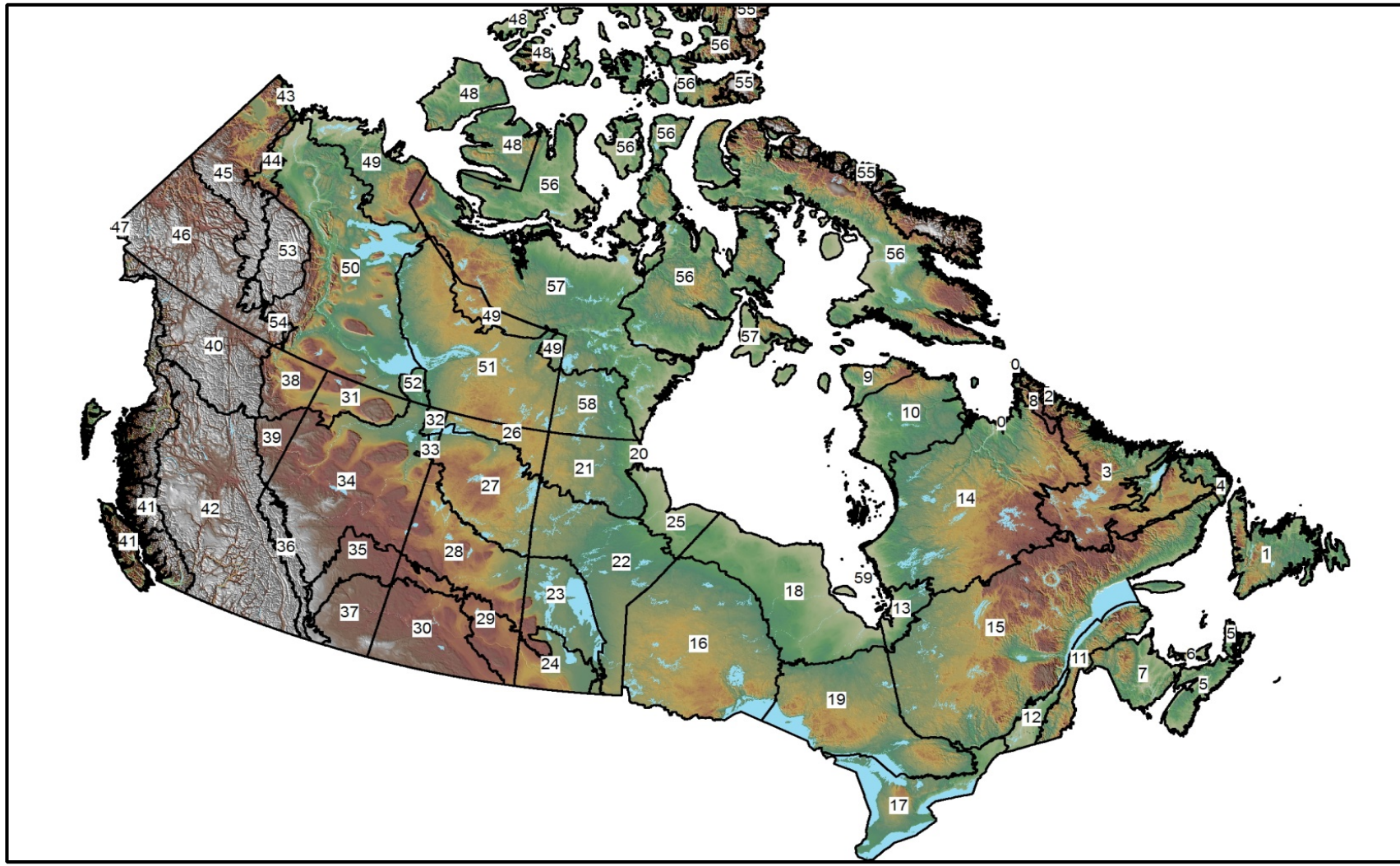


The Team:

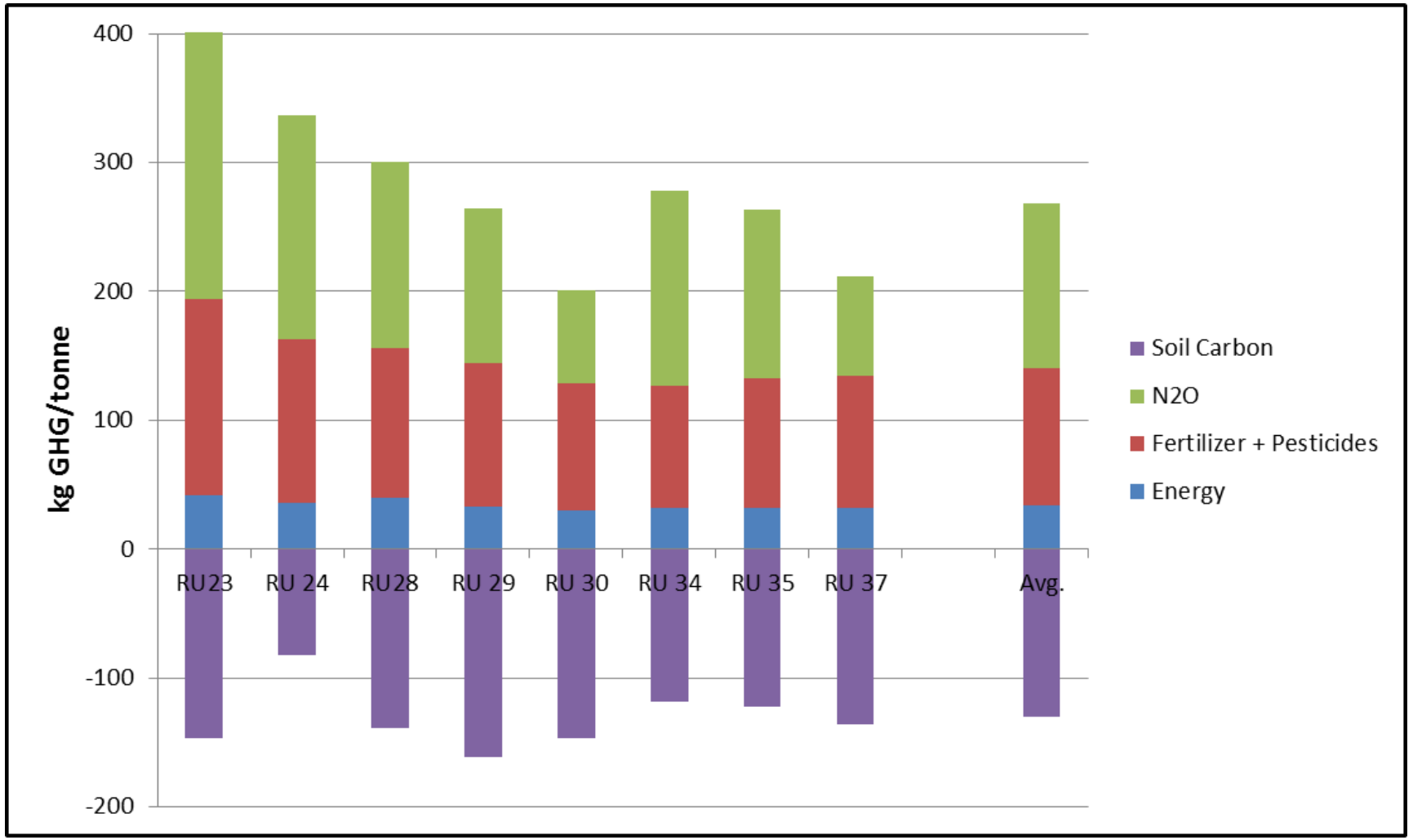
- Fran Burr
- Ian Thomson
- Mike Buttenham
- Serecon
  - Bob Burden
  - Angela Pearson
- Groupe AGÉCO
  - Jean-Michel Couture

Carbon Study – The Regional Approach

- A comprehensive carbon analysis
  - i.e. analysis of the balance of greenhouse gas emissions and removals)
- Using the regional approach (RU's)
- For each of the grains for which such values do not yet exist.



Carbon Study - Regional Comparison [Barley]



Canadian Fertilizer Study

- A key parameter of the GHG footprint of a crop is fertilizer
- Two aspects
  - The use by growers of fertilizer by type and application rate on the fields
  - The ”upstream’ footprint of the fertilizers produced
    - Can vary from one country to another
    - Therefore important to have verifiable data for fertilizer production in the Canadian context
- Study provided a full lifecycle greenhouse intensity estimates
  - Included all emissions from the well, or mine, to the plant gate

Social Metrics Study

- How is Canada doing in the Social Pillar?
  - What schemes, frameworks and indicators are out there and may impact Canada? Organize into PCI frame*
    - 54 Schemes reviewed, 16 rated as relevant
  - Which indicators are relevant?
    - Catalogue of indicator areas, across all schemes rated as to importance
    - 23 Indicators selected for further analysis

*PCIM Organization

- **Principle**: broad statements of an aspiration or objective, reflecting essential elements that the CRSC value chain embraces (e.g. provide safe, fair and respectful working conditions to all employees on farm)
- **Criteria**: a measureable condition that contributes to achieving a principle, adding specificity and meaning to the breadth and generality of a principle, without the criterion itself being a measure of performance (e.g. worker safety)
- **Indicator**: quantitative, qualitative or binary variable that may be measured or described in response to a defined criterion (e.g. use of protective clothing)
- **Metric**: the specific means of measuring the practice or action farmers must adopt or implement in response to a defined indicator (e.g. workers will be provided with (and use) free PPE when necessary to reduce risks to an acceptable level)

- The terms *indicator area* and *criteria area* refer to the general aspect that a cluster of indicators or criteria addresses when they are drawn from multiple schemes. They are absent the directionality or thresholds that are present in actual indicators and criteria.

Social Metrics Criteria Areas

1. Provide safe, fair and respectful working conditions to all employees on farm
    1. Worker Safety
        1. Worker training * Pest management practices / other hazards * Use of protective clothing * Health and safety procedures * First aid and medical assistance
    2. Labour Relations
    3. Working Conditions
    4. Working Environment
2. Promote responsible community relations
3. Ensure legal compliance and adoption of Good Business Practices

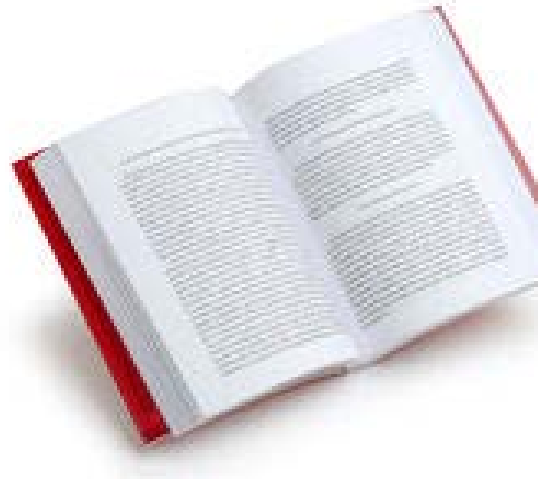
Social Metrics Study

- How is Canada addressing these indicators
  - Bibliography of studies, laws and regulations
  - Analysis of the gaps between scheme requirements and current and foreseeable sector performances
- Apply the gap analysis to a list of metrics to determine which are fulfilled by current data
- Synthesis analysis based on market exposure and opportunity, gaps, subsector resources and other strategic factors

Social Study – Conclusions

- Very few (if any) indicators are market-driven
  - However, majority are regulated to some extent
  - Compliance requirements could someday be associated with the sector's social license to operate
- There is a significant lack of data and knowledge regarding farmers' compliance with the regulations
  - There are no studies
  - It is not possible make any claims

Social Study – Conclusions



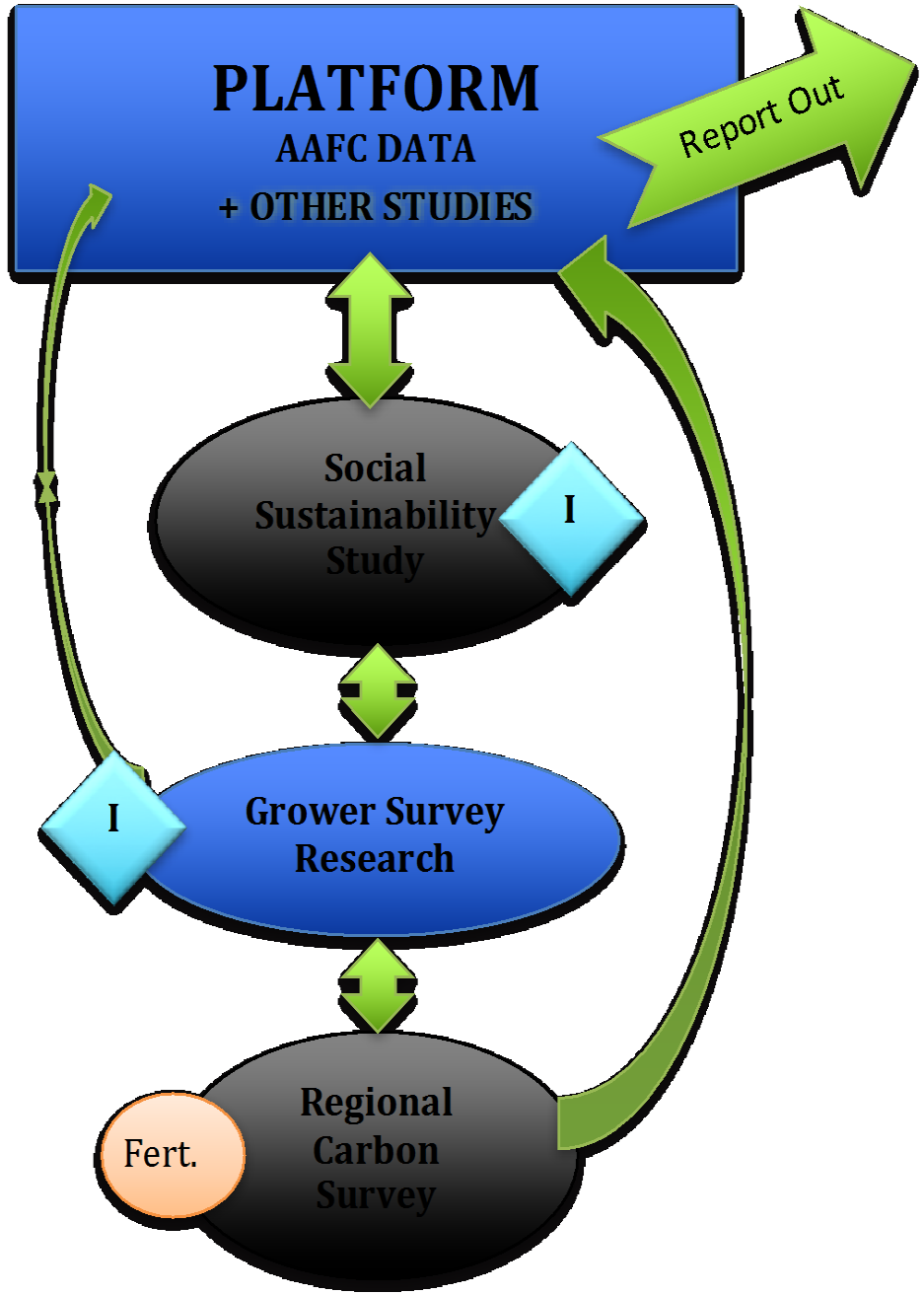
- There are gaps between what is expected from the regulation and farm practices
- There is a gap in the perception of what is of significance for the sector and what is required in the sustainability schemes
  - e.g. worker contract, collective bargaining, child labour, etc.
  - They were not considered relevant in Canada. Yet are regulated or addressed in the schemes, in addition to being promoted as good practices by many Canadian farming organisations

Social

- Working conditions
- Community relations
- Legal compliance and good business practices

Project Outline

- Four Inter-related Projects
  - **Platform Development**
    - **A place to put our studies**
    - **How do we organize it?**
  - ✓Carbon LCA
    - Fertilizer Study
  - ✓Social Survey
    - Indicators
  - **Grower Survey**
    - **What do we need to know?**



Grower Survey

Objectives:

The objective of the grower survey is to validate the use of ‘macro’ indicators to represent Canadian agriculture practices and to establish a current benchmark.

1. Collect microdata
2. Verifying practices
3. Communicating sustainability
4. Across Canada, for 10 crops
5. Statistically significant number of farmers

Environmental and Economic Indicators

- Major deliverables:
  - Groupe AGÉCO (Platform index)
    - Determination of relevant schemes, criteria areas, indicator areas and metrics
    - Development of an inventory of studies, standards, and BMPs
    - Assessment of the sectors ability to address
    - Inform a final set of metrics (with committee)

Environmental and Economic Indicators

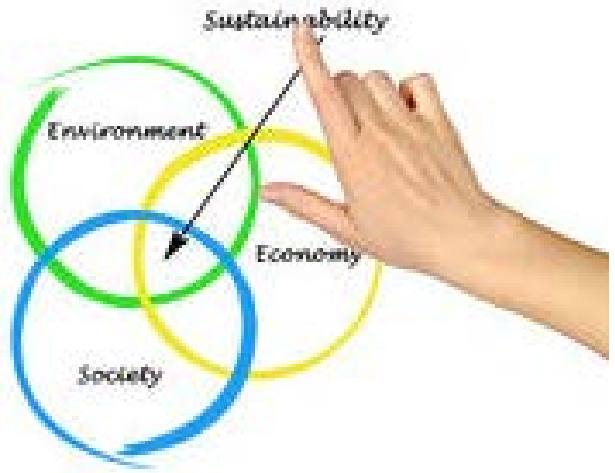
- Major deliverables:
  - Serecon (data and platform development)
    - Conduct an environmental scan of the information currently available from AAFC determine the level of data aggregation that can be achieved
    - Assess and inventory macro data available from other sources
    - Compare macro data -determine if micro data will be required and if so identify
      - what pathways are available in order to collect it
    - Co-develop the structure of the platform (with the CRSC PCI committee) to guide the creation of the interactive Regional Metrics Reporting Platform.

Environmental Indicators - *DRAFT*

1. Agrochemical management
   - Use of agrochemicals, Selection of agrochemicals, Plans and procedures, Application of agrochemicals, Documentation, Storage, Equipment, Cleaning and disposal of spray mix and containers, Facilities
2. Integrated pest management
3. Nutrient management
4. Soil quality, productivity
5. Water quality, quantity
6. Biodiversity
7. Air quality and GHG emissions
8. Energy consumption
9. Waste and pollution
10. Planting material management
11. Environmental responsibility

Economic Indicators - *DRAFT*

1. Financial Viability
   - Business plan, Farmers organization, Profitability, Liquidity, Risk management, Diversification, Documentation
2. Business relations
3. Safety, quality and transparency
4. Continuous improvement
5. Operations & materials efficiency
6. Innovation and technology adoption



Grower Survey

Objectives:

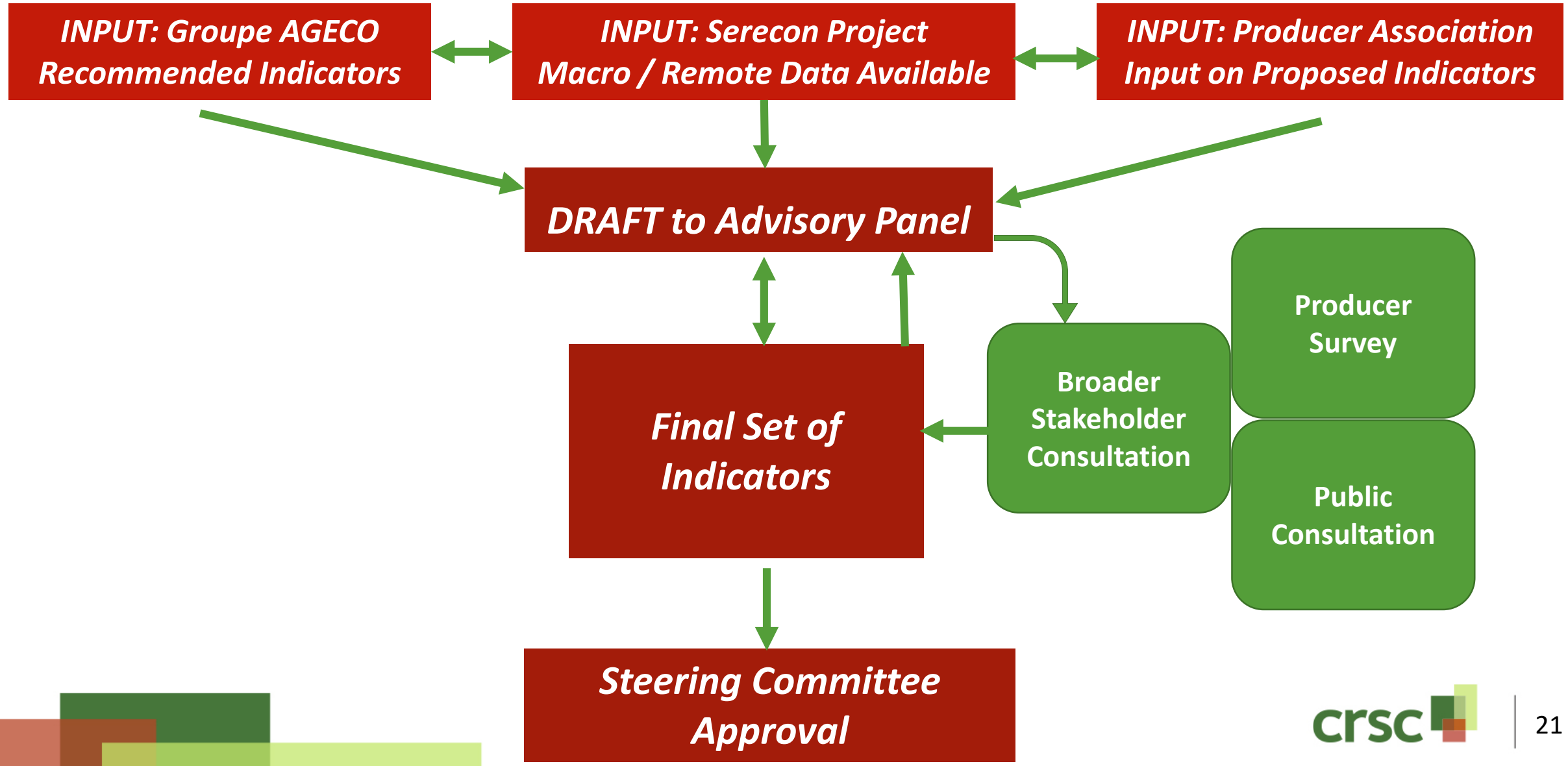
- Strategically gather information based on our current gaps as determined by the Serecon and Groupe AGÉCO projects:

Ideally would cover all:

1. Collect statistically relevant data to populate gaps in the Platform dataset for certain Indicators
2. Capture producer reaction to proposed Indicators
3. Discover the gap between the Indicator measure and actual practices by producer

- Administer in spring 2017

Creating CRSC Sustainability Indicators: Working Group Managed Process



The Sustainability Verification Maze

Sustainable Ag Code

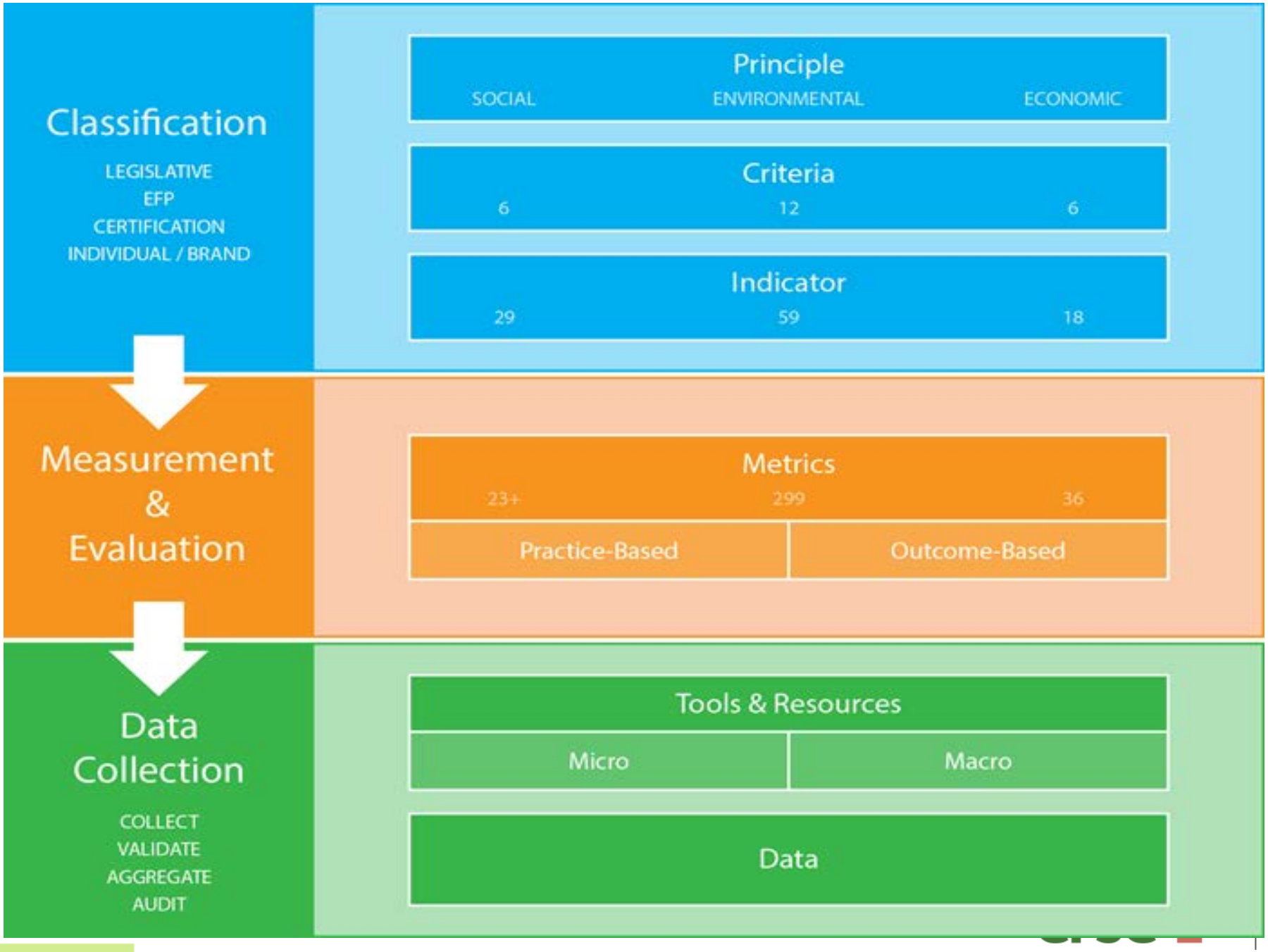
Supplier Code

Supplier Code of Conduct

Sustainable Ag Guiding Principles

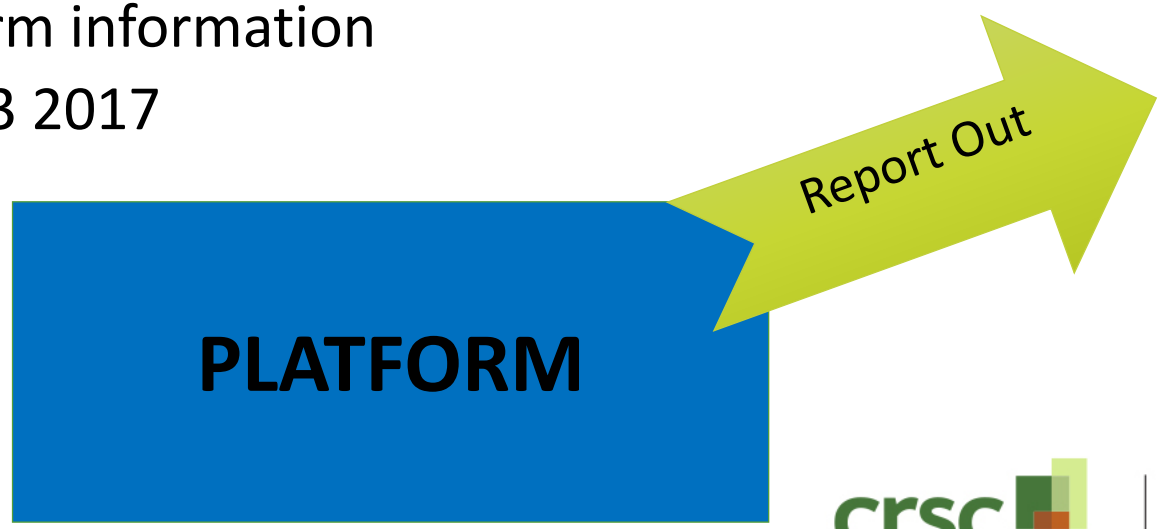
THE PLATFORM

REPORTING OUT BY USER NEEDS



Summary

- Progress
  - Social Study completed
  - Carbon LCA to be completed over next 3 months
  - All Indicators being catalogued
  - Data being collected
  - Platform Development and Grower Survey to be initiated next
  - Finalize indicators to organize platform information
  - All Sub - Projects will be delivered Q3 2017
  - AMP communication Q2 2018
- Deliverable
  - a SUSTAINABILITY DATA platform



Thank You

Exam

What is an RU?

What does the metrics platform do?

What doesn’t the metrics platform do?

Are you interested in the Platform prototype webinar?