Livestock for Social Development

Ernesto Reyes

Rome, GG Meeting
06 March, 2018
It has been agreed that the initial focus of this Action Network will be on dairy (cows and buffaloes) to start with and motivate others livestock groups
Livestock stakeholders are unable to consistently measure the value of livestock to social development.

**RATIONALE**
- Little and incomplete information on the number of people that depend on livestock for their livelihoods.
- No consistent methodology to assess the socioeconomic benefits derived from livestock activities.
- Opportunities that livestock provides to contribute to social development remain untapped.

**INSTITUTIONS**
- Livestock Information, Sector Analysis and Policy Branch
- DAIRY DEVELOPMENT PILLAR
- IFCN DAIRY NETWORK

**WORKING AREAS**
- Evidence
- Social Impact Assessment
- Conceptual framework

**GLOBAL AGENDA FOR SUSTAINABLE LIVESTOCK**

**GLOBAL DAIRY PLATFORM**

**LIVESTOCK INFORMATION, SECTOR ANALYSIS AND POLICY BRANCH**

**DAIRY DEVELOPMENT PILLAR**

**IFCN DAIRY NETWORK**
AIM: To provide robust evidence of the impacts of the dairy sector and its development on social and economic conditions

OBJECTIVE: Quantitative and robust information on impacts of dairy development on ‘livelihoods’ as potential tool to support achievement of SDG1

APPROACH: Systematic literature review: 5 literature databases, 6 search strings
Preliminary conclusions (what is the evidence telling us)

- Considerable heterogeneity in study designs, assessed impacts and respective metrics
- Remarkable consistency in reported outcomes, which are:
  - Always positive
  - Nearly always statistically significant
  - Sizeable (in most cases >20% improvements)
Preliminary conclusions (what is the evidence telling us)

**Milk consumption.** All studies report a substantial increase in household milk consumption (from a very low base).

**Household income.** Studies found significant positive impacts on household food expenditure and observed significant positive impacts on non-food expenditures.

**Employment.** Studies reveal significantly higher employment generation by dairy farms. In addition to generating significantly more employment per cow, also pay higher wages.

**Employment**. In ‘modern’ dairy industries, around one non-dairy farm job is created for every dairy farm job. For the processing sub-sector, employment multipliers are even higher and range from 3.3 to 9.5
Preliminary conclusions (what is the evidence telling us)

in Tanzania 5 to 6 years after its inception have found that families that barely managed to survive 6 years ago, are now considered wealthy. After 3–4 years, some farmers saved enough to improve their houses, to increase their land area under crops, and to send their children to secondary school.

An additional benefit of DD programmes observed is the increased involvement of women in household decision-making.
Preliminary conclusions (what is the evidence telling us)

The scientific literature on the economic impacts of dairying on household and community welfare provides strong evidence that in specific settings dairy development can make a significant contribution to poverty reduction.
Dairy and poverty reduction

Output: FAO publication (Q2 2018)
Public availability, Electronically, Hardcover edition

- Executive summary
- Rationale
- Findings
- Discussion
- Conclusions and recommendations
- References
- Annex

TO BE LAUNCHED AT THE NEXT MSP IN MONGOLIA
Conforming task force group

Workshop for guiding Dairy Impact Methodology (DIM)

DIM prototype
The selection of a core set of indicators to measure social impact

- Define working and conceptual framework
- Determine basic elements to measure
- Conform a working consultancy group
- The selection of a core set of indicators to measure social impact
- The development of a model to link input and output indicators
- Testing and refining methods / models

DIM prototype
Dairy impact analysis approach

What to measure (SCOPE)

- Current contribution of dairy
- What if analysis
- Return on Investment
- Social ROI

DIM prototype

Milk production value
Job creation
Income generation

Upstream Downstream
The Dairy Impact Assessment Model is a Microsoft Excel based tool to assess the social and economic impact of dairy developments in a milkshed / region / country.

The model is available in two tiers:

1. Basic version (data source = user data input)
2. Advanced version (data source = IFCN estimates)

Following figure describes the flow of information:
DIM prototype

**Input variables**

**Dairy Facts**
1. Total milk production in the country/region per year
2. Total number of dairy cows/buffaloes in the country/region
3. Total number of dairy farms
4. Total milk delivered in the country/region
5. Total milk equivalents exported in the country/region per year
6. Total milk equivalents imported in the country/region per year
7. Total population in the country/region
8. Total agriculture GDP per year
9. Value added percent share of dairy sector

**Production Value**

**Upstream value chain**
10. Milk yield per cow per year
11. Fat
12. Proteins
13. Milk price of formal market (excluding VAT) per kg milk
14. Milk price of informal market for farm
15. Cattle returns (including other returns) per kg milk
16. Coupled Subsidies
17. Total decoupled subsidies
18. Other subsidies incl. VAT balance
19. VAT rates on milk at farmgate

**Downstream value chain**
20. Milk consumption per capita
21. Milk retail price in formal sector
22. Milk retail price in informal sector
23. VAT per litre Milk equivalent
24. FOB Milk equivalent price
25. Milk equivalent import price
26. Processing industry subsidy

**Impact on Employment**
27. Labour hours per cow per year
28. Standard manhours per full-time job per year
29. Working days per full-time job per year
30. Proxy variable for upstream full-time direct jobs
31. Proxy variable for downstream full-time direct jobs
32. Proxy variable for upstream full-time indirect jobs
33. Proxy variable for downstream full-time indirect jobs
34. Proxy variable for upstream full-time jobs (informal)
35. Proxy variable for downstream full-time jobs (informal)

**Impact on Farm Income**
36. Minimum wage for off farm work
37. Poverty line per capita per day

**Based on Typical Farm Data**

**For average farm**
38. Number of adult equivalent family members
39. Farm household cash income per year
40. Off farm income per year
41. Return to labour from dairying (incl. subsidies)

**For large farm**
42. Number of adult equivalent family members
43. Farm household cash income per year
44. Off farm income per year
45. Return to labour from dairying (incl. subsidies)
46. Average wages in the typical average farm
47. Type of production system of average farm
## Output variables

### Dairy Impact Assessment - Germany

<table>
<thead>
<tr>
<th>Dairy Facts</th>
<th>Impact on Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>36.78 Million Ton Milk Produced</td>
<td>281,364 Full time jobs created</td>
</tr>
<tr>
<td>69 Thousand farms</td>
<td>158,739 Number of farm jobs</td>
</tr>
<tr>
<td>4.2 Million Cows</td>
<td>122,625 Number of up/down-stream jobs</td>
</tr>
<tr>
<td>96% Milk delivered</td>
<td>3 Number of jobs / 1000 litres milk / day</td>
</tr>
<tr>
<td>49.6% Milk exported from production</td>
<td>15 Cows per full time job</td>
</tr>
<tr>
<td>47.7% Milk imported on demand</td>
<td>9 Jobs / million USD sales</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production Value</th>
<th>Impact on Farm Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.936 Million USD Sum of dairy value</td>
<td>80 cows Average farm</td>
</tr>
<tr>
<td>15.679 Million USD On farm value</td>
<td>192% Above Poverty line</td>
</tr>
<tr>
<td>28% of agriculture GDP</td>
<td>62% of Local wages potential</td>
</tr>
<tr>
<td>2.198 Million USD Farm subsidies</td>
<td>500 cows Large farm</td>
</tr>
<tr>
<td>2.373 Million USD Government VAT revenues</td>
<td>622% Above Poverty line</td>
</tr>
<tr>
<td>1.610 Million USD Net trade value</td>
<td>132% of Local wages potential</td>
</tr>
</tbody>
</table>
Basic dairy facts

**Dairy Impact Assessment: Germany**

**Dairy Facts**

<table>
<thead>
<tr>
<th>Milk Production</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>36.8 Million Ton (ECM)</td>
<td>15.679 Million USD/year</td>
</tr>
</tbody>
</table>

**Income**

<table>
<thead>
<tr>
<th>Number of cows</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Million cows</td>
<td>281.364 Total jobs created (direct-indirect)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production / cow</th>
<th>Income Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>8038 Litres cow/year</td>
<td>Monthly Income comparison (USD/month)</td>
</tr>
</tbody>
</table>

**Number of farms**

<table>
<thead>
<tr>
<th>Milk Deliveries</th>
</tr>
</thead>
<tbody>
<tr>
<td>69 Thousands</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>of Agriculture GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>28%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To formal markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>96%</td>
</tr>
</tbody>
</table>
There is a need to define the scope and working areas of the Action Network. This has to be discussed in the following A.N. meetings. Proposal are welcome.
PROJECT PROPOSAL TO POTENTIAL DONORS
3-4 years proposal for delivering evidence and testing DIM in several countries

WORKSHOP FOR DEFINING SCOPE AND CONTENT LINES

WORKSHOP FOR GUIDING DAIRY IMPACT METHODOLOGY (DIM)

CASE STUDY ON PASTORALISM
(Proposal – others are welcome)
The main potential contribution of this AN to COP 23:

Socioeconomic and food security dimensions of climate change in the agricultural sector

achieved by the main working lines of the AN: Evidence and impact methodologies and guidelines
Regarding GFFA this AN will contribute providing guidelines and tools for assessing the potential role of livestock on social development as well as to Policy recommendations of the Committee on World Food Security (CFS) at its 43rd session on "Sustainable Agriculture Development for Food Security and Nutrition: What Roles for Livestock?"