



Challenges to coordinate food legislation to support household food security

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Food security

Physical, social and economic access to sufficient, safe and nutritious food for all people, to always meet nutritional needs and preferences for an active healthy lifestyle

3 pillars: Food availability, Food access, Food use (4th = sustainable)

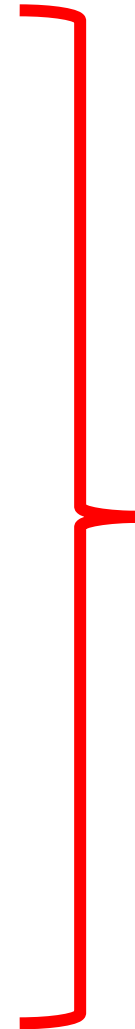
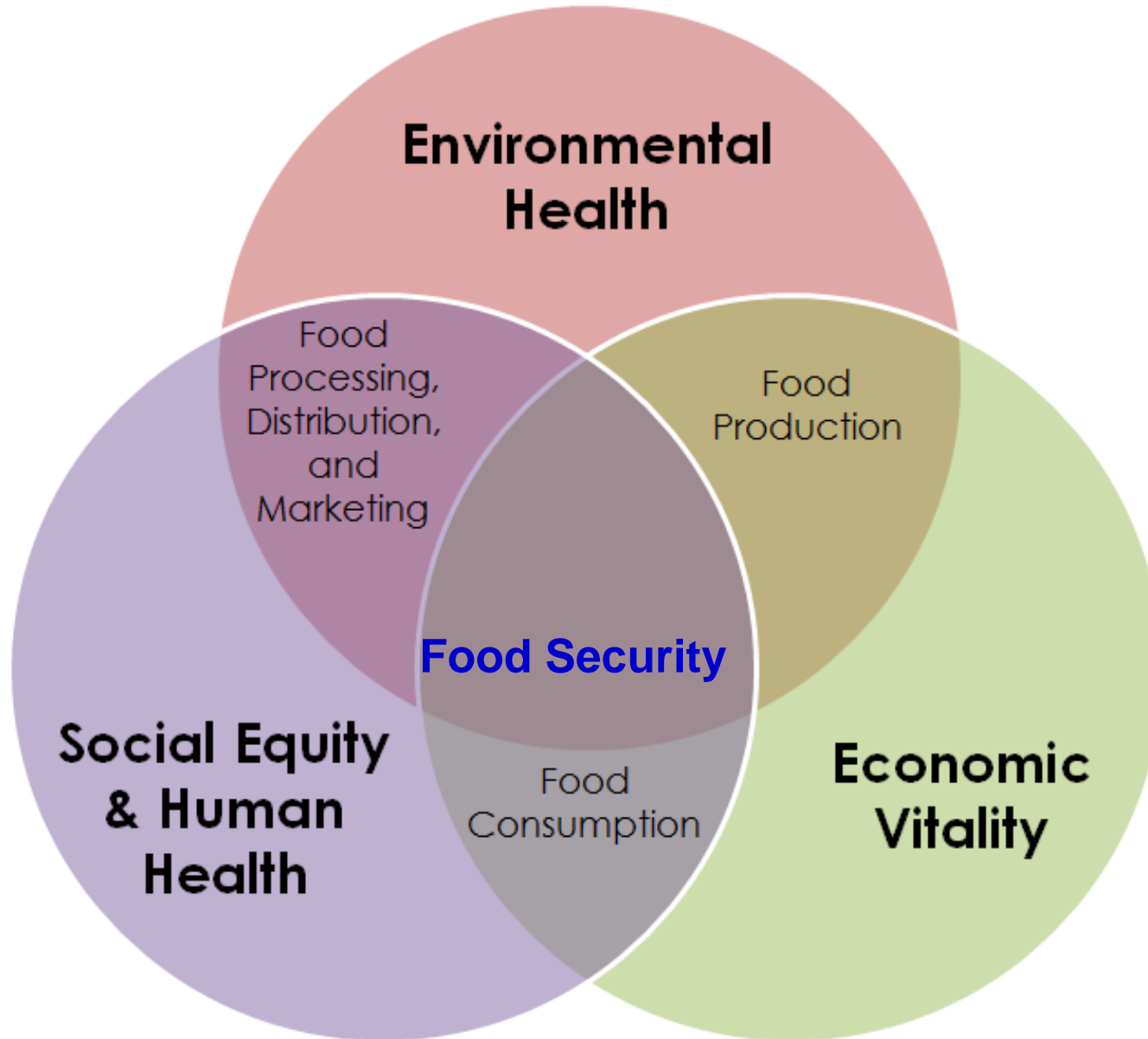
Food security is a complex sustainable development issue, linked to health through malnutrition, but also to sustainable economic development, environment, and trade.



Food security happens when...

- **farmers can earn a fair income for their efforts**
- **food is produced in a way that is safe for people and the environment**
- **local, regional and community food production**
- **social justice and inclusion are priorities**
- **empowerment to work together to create positive change in the food system and communities**

Complexity of food security

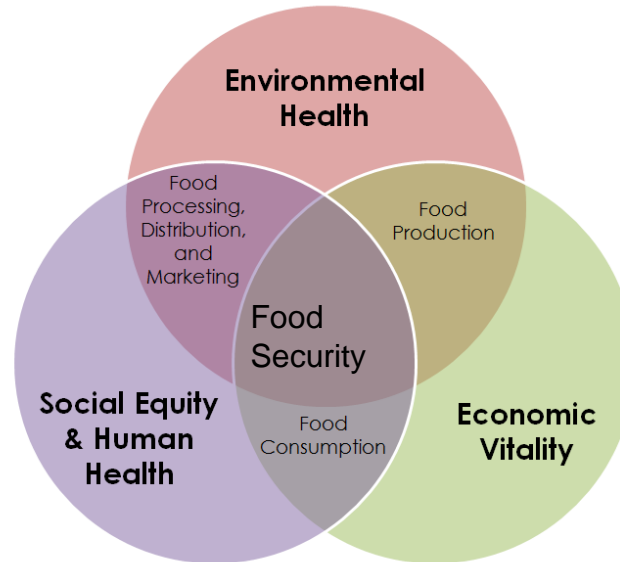


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Complexity of food security

Food produced environmentally sustainable and in a socially just manner

Food access is closely linked to food supply, Food system includes all aspects from production to consumption of food



Physical & economic access to adequate amounts of nutritious, safe, and culturally appropriate foods

Producers able to earn living wages

Food insecurity happens whenever food is hard to get, such as when:

- **there are no farms or grocery stores nearby OR our food travels great distances to get to us OR healthy & safe food is not available**
- **there isn't enough money OR healthy foods cost more than unhealthy foods**
- **our rivers are polluted → fishes don't survive OR polluted water get on food (salads eaten raw)**
- **our traditional foods are not available or accessible**

Reality of poverty and starvation



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How does affect communities?



Solving the problem?

- ***Food availability*** – continuous provision nationally and in households
- ***Access to food*** - sustained sufficient amount of food obtained
- ***Reliability*** of safe and nutritious
- ***Food distribution - sustainability*** at all times and locations - not just certain parts of country
- **Limit wastage (of food) (thus reliable systems to maintain quality)**

NATIONAL FOOD SECURITY

FOOD PRODUCTS

Production, Processing,
Consumer



FARM COMMUNITY

Communal / house



HOUSEHOLD



CONTRIBUTING FACTORS

Production, Practices,
Knowledge, Income



FOOD SYSTEMS

Availability

Production &
trading

Accessibility

Production &
income

Utilisation

Handling
Nutrition & safety

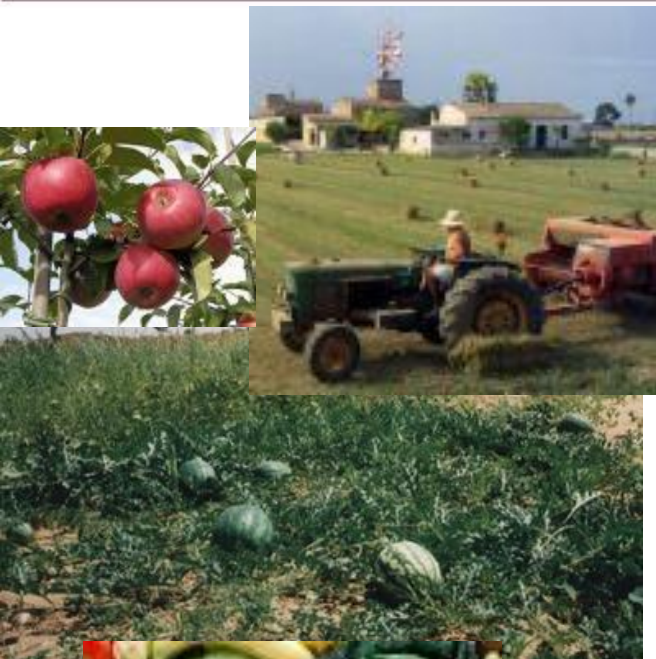
Stability

Safety nets



HOUSEHOLD FOOD SECURITY

Processes & flow



Farm → fork
(subsistence)





Production



Processing



Retail


Consumer

Variety



MAP

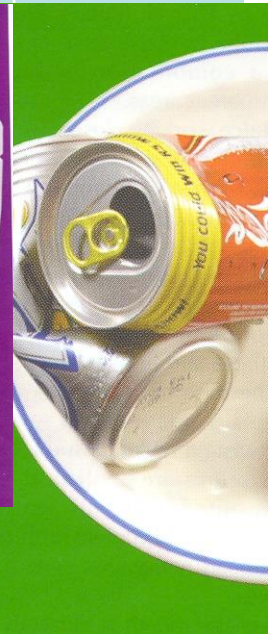
Glass

Paper

Plastic

Foil

Tin

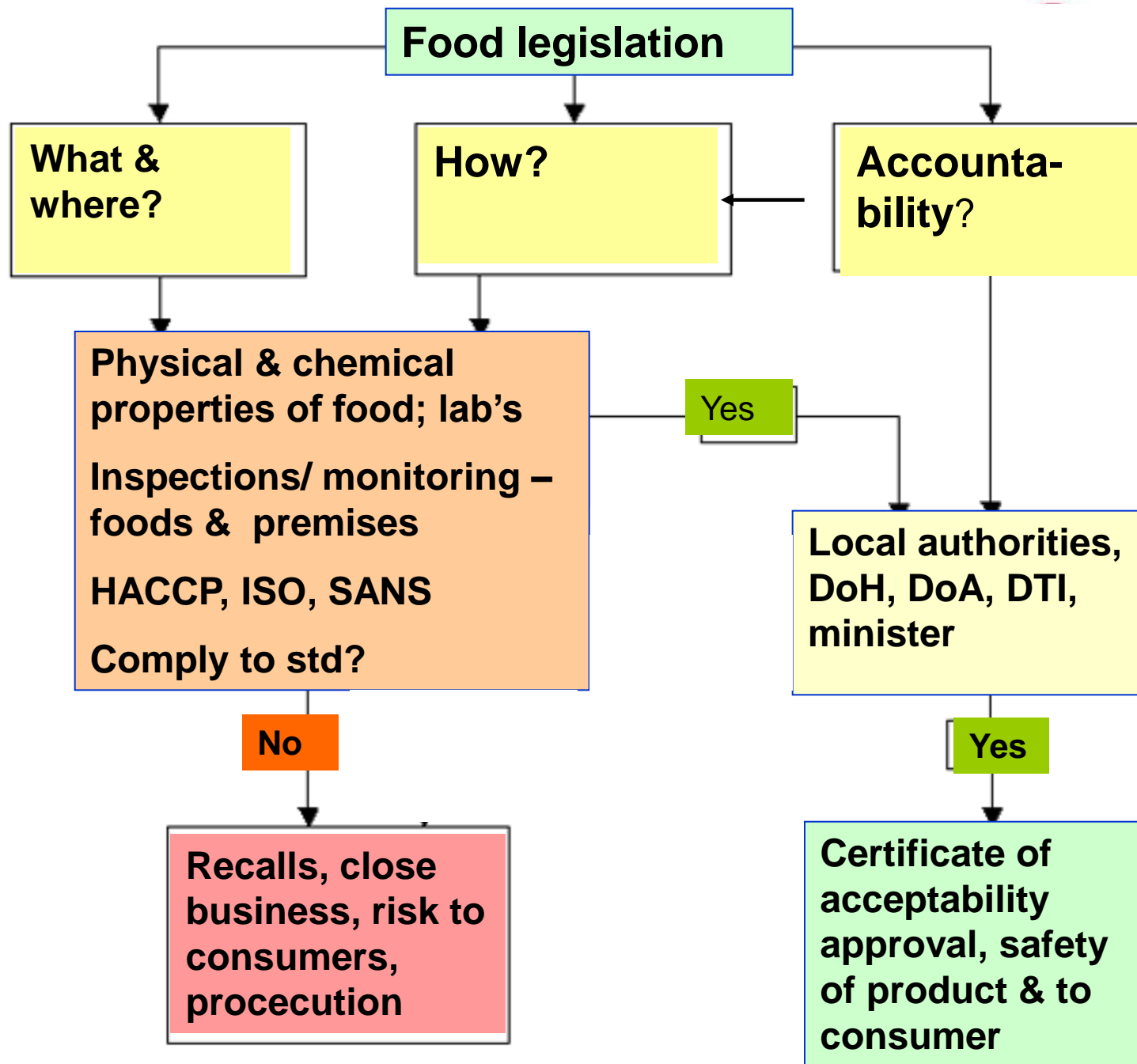


**Packaging
(& Storage)**



Implications for consumer

- **Why is legislation needed?**
 - Consumers need food to live, but :
 - If not controlled, can cause illness / death
- **Food legislation :**
 - Regulate food processing & labeling
 - Regulate the chemical & microbiological safety of food
 - Protecting the consumer
 - Provide guidelines for quality assurance
- **Ensuring high quality products to the consumer**
- **Consumer trust ensures continuous support product / company**



Challenges of Food legislation

Department of Health

- Directorate: Food control - Food legislation
- [Foodstuffs, Cosmetics and Disinfectants Act, 1972 \(Act 54 of 1972\)](#) - Updated version (PDF)
 - HACCP & *hygiene matters*
- [The Health Act, 1977 \(Act No 63 of 1977\)](#)

National Dept Agriculture

- **Animal Health**

Meat Safety Act, 2000, no. 40 / 2000

Dept. Veterany Services: Meat Inspection Act

- *Safety of meat & animal products*
- *Standards for abattoirs*
- *Import & export of meat*

- **Food Safety and Quality Assurance**

Liquor Products Act, 1989. no. 60/1989

Agricultural Product Standard Act, 1990 no. 119 /1990

- **Biosafety**

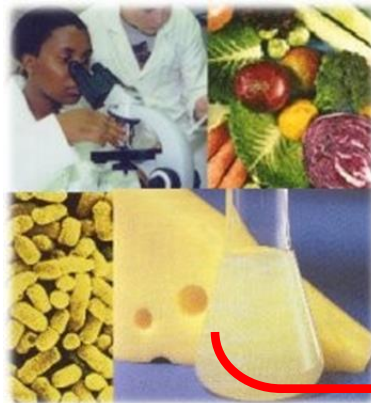
Genetically Modified Organisms Act, 1997 no. 15/1997

- **Dept. Trade & Industry –**

[Canned meat, frozen & canned fish]

Who is responsible for management & application?

- **Government Departments**
- **Local authorities**
- **SABS / SANS Standards Act (1993)**
- **[Any person / organization that provides food / supplies - responsibility]**



Comply to standards



Consumers' action

Basic food knowledge

Food utilisation → Ensure quality & safety



Chemical & microbiological changes

Safety

Enzymes, toxins and metabolic processes - processes to prevent growth of micro-organisms

Knowledge regarding food utilisation

- > 70% respondents correctly answered food knowledge & food handling and storage questions
- > 80% respondents correctly answer questions regarding hand washing procedures

Food consumption

- **Food products consumed [once/more /day (50-79%)]:** milk, maize meal (porridge)
- **coffee creamer**
- **Food products consumed [once/week (50-79%)]:** rice, pumpkin, carrots, green beans, cabbage, inkomaas, pilchards, beef stew, beef mince, pork
- **Food products consumed [2-6x/week (50-79%)]:** bread, potatoes, marogo, chicken, eggs
- **Food products seldom/ never eaten (>80%):**
 - Pronutro, powdered milk, **lentils, dry beans**

Food security status

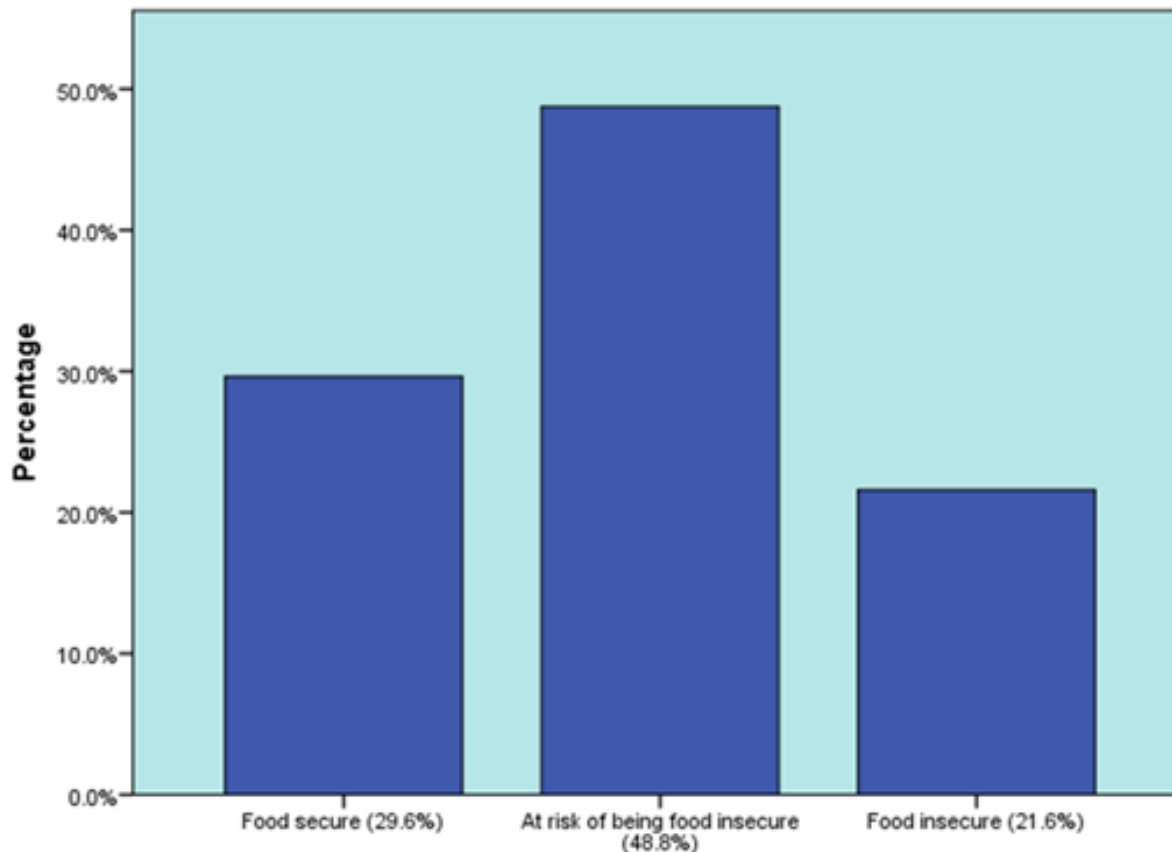


Figure 1: Respondents' food security status

Labadarios
(HRCS)(2013)
26% of the
population
experienced
hunger, 28.6% at
the risk of being
hungry.

Projects

Product development to support consumer needs :
nutritional demands, convenience, economic



Amaranthus

- 3 different amaranth containing multigrain breads
- Breads contained 15.5% amaranth grain, 12% oats and 57% wheat flour.
- Amaranth and sunflower / flax seeds were used to enhance the nutritional value of the breads
- Results revealed that the brown sunflower seed bread was preferred regarding taste, appearance and texture

Amaranth protein energy bar

- High protein energy bar containing 18% amaranth and 18% peanut butter
- Developed for vegetarian or athlete market
- 47.2% respondents who consume energy bars regularly indicated they prefer the test sample above the bars they presently consume.
- 83.3% indicated that they would consider purchase if the bar is commercially available (19.4% > once a week and 30.6% once a week)

Amaranth porridge “stywe pap”



- Maize flour supplemented with amaranth flour (20, 25 and 30%)
- Traditional and test products evaluated for acceptance based on appearance and taste and preference for of the products. The amaranth containing porridge was chosen by the majority of the participants based on the taste however the appearance was less acceptable.

Extrusion technology

- Sweet caramel cinnamon round puffs
- Salty cheese & pepper curl snack



Extrusion technology

Carrot, beetroot & potato products



Consumer acceptance testing



Conclusion

- Food legislation is in place to ensure safe quality foods reach consumers
- Although consumers may have the right knowledge regarding foods, diversity lacks mostly due to poverty
- Production of indigenous crops, incorporating it in “modern” foods may re-expose communities to it, but it may also develop into income generating projects
- Extrusion is an economic way to produce and provide food by/ with/ in communities

What to achieve?



Sustainable & self-sufficient communities

