

**Agroecology as a
World View:
Education for Improving Food
Production, Incomes, Nutrition,
and Rural Development**

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Learning is Holistic and Systemic

- Study whole farm systems
- Community food systems
- Look for integration

Life is holistic & connected

- university, travel, home are one continuum of involvement

efficiencies



Learning resource efficiency is key to future


- Systems based on local resources
- Renewable resources are essential
- Systems designed for recycling



Personal lifestyle choices for us:

- No car in Norway
- Use bikes & public transport
- Keep house temp at minimum for comfort & health
- Use solar ovens
- Collect leaves from neighbors in Nebraska

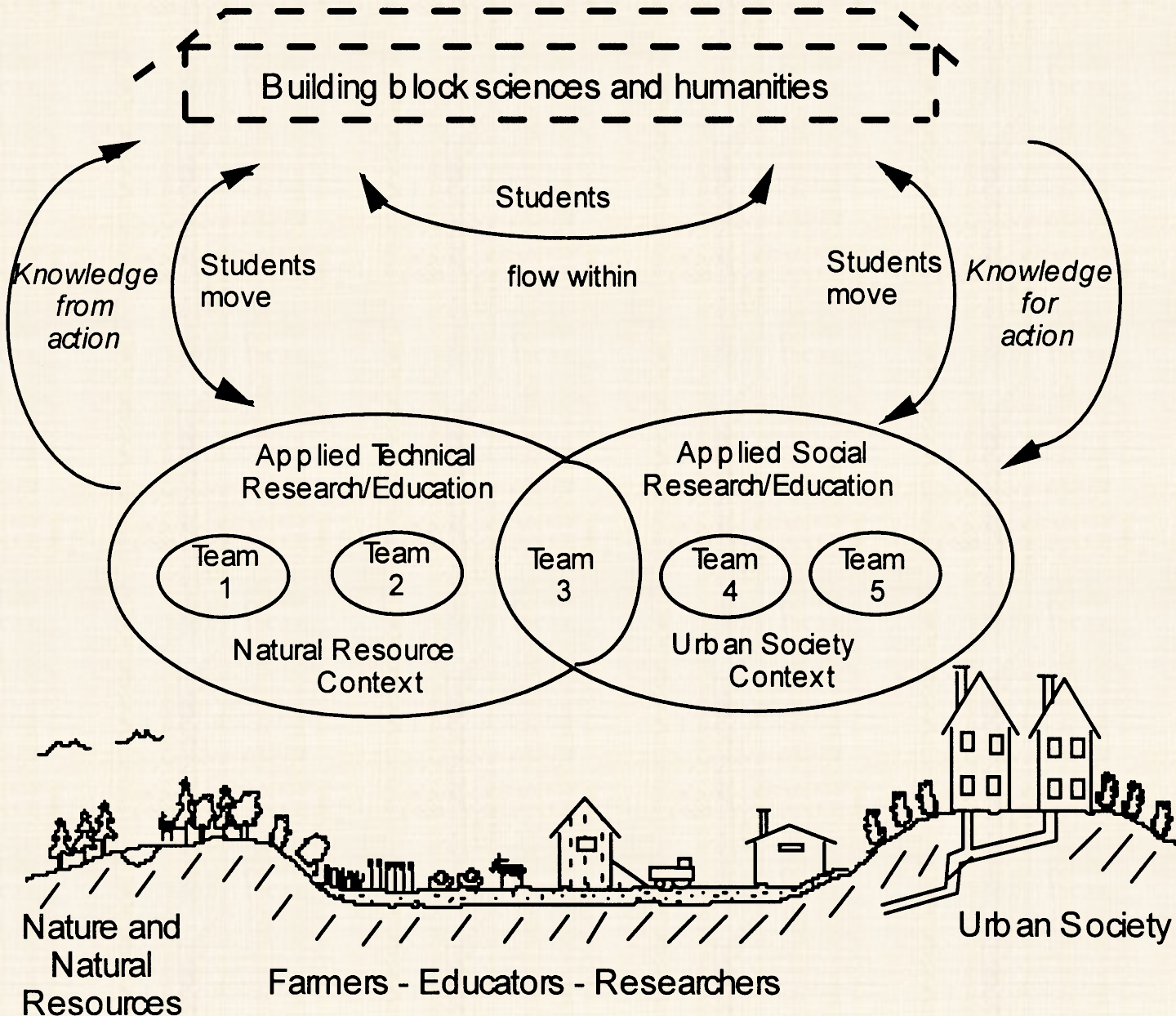
Learn from Farmers



Interviews with stakeholders for gathering information about goals and long-term hopes of community food system advocates; learn and practice interview techniques

My personal experience in farming, travel and work in many countries, with long-term work in Philippines, Colombia, California is valuable.

Future Active Learning University



Schematic of future active learning university, student and faculty learning in the farming environment, close contacts relationships with natural resources and urban society [Lieblein et al., 2000].

Agroecosystems based on Ecology & Natural Ecosystems



Our garden at home has diverse plantings of trees, shrubs, natural vegetation and no use of chemical pesticides or fertilizers; compost area is 20 m long x 1.2 m wide x 1 m high



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Food systems should be local & organic

- Nordic countries have national goals
- Reduce chemicals & pollution



Home organic garden in Nebraska covers 300 square meters, where we intercrop 20 vegetable and berry species; demonstration for neighbors and students as part of our life style

Diet is important:

“Eat food. Not too much. Mostly plants.”

[Michael Pollan, *In Defense of Food: An Eater's Manifesto*](#)



At home we eat mostly plant-derived foods; most protein comes from beans, lentils, yoghurt, tofu, peanuts, other plant sources

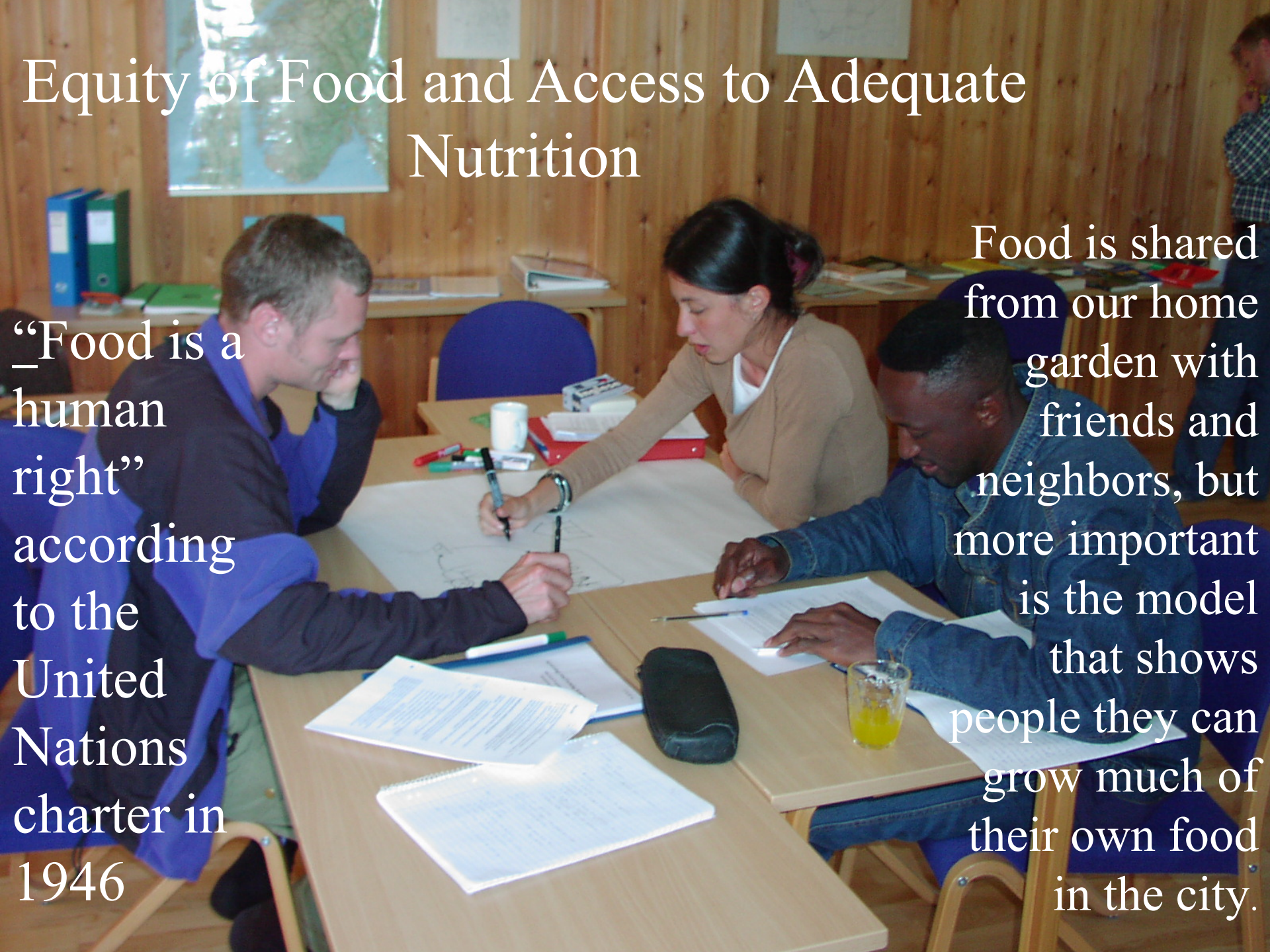
Food produced for people, not for animal feed or to replace fossil fuels

- About 33% of land used today to produce animal feed, mostly maize and soybeans
- Livestock directly responsible for 25% of anthropogenic GHG emissions, and including production of feedgrains this is over 50% of emissions
- Using this same grain production for direct human food consumptions will solve much of the global food crisis
- 90% of grain sorghum produced today in U.S. goes for ethanol production

Equity of Food and Access to Adequate Nutrition

“Food is a human right” according to the United Nations charter in 1946

Food is shared from our home garden with friends and neighbors, but more important is the model that shows people they can grow much of their own food in the city.



Building a Social Learning Community



Building a social learning community is a conscious activity fostered by class potluck suppers and waffle breakfasts [students meet each other and meet instructors in informal settings outside lectures -- builds trust, communication, and teamwork] “Immediacy helps learning”

Human population growth is the elephant in the room ... there are no real solutions to sustainable global food and resource use without solving the population dilemma



“Reflection sessions and discussions are tools to avoid tensions in groups. By reflection sessions, frameworks are created where everybody, also those who mostly hold back and are quiet, have the possibility to express their feelings, especially on sensitive issues”

Structure of Agriculture



We need to deal with the large issues such as structure of agriculture, land grabs, concentration of resources and power in a few hands, at all levels in the spatial hierarchy.

Evaluation of Learning

Student Learner documents for self-evaluation provide an in-depth reflection on learning process and personal role

Learner documents over 14 years studied through text analysis and systematic classification; we interpret documents by identifying themes and emergent properties

Learning style has proved worthwhile for many, Canadian student: “I will say one thing about learning: this course has convinced me that experience-based learning is the most powerful method for building knowledge that is useful in the world”

After experience of working in environment of multiple perspectives, dealing with complex problems, students feel confidence in communicating with stakeholders and well prepared to take on other challenging tasks

On the whole, experiential learning based on the students’ own solving of real-life cases proves to be a meaningful and valuable experience

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