# WHAT IS LOCAL KNOWLEDGE?

Local knowledge is the knowledge that people in a given community have developed over time, and continue to develop. It is:

- Based on experience
- Often tested over centuries of use
- Adapted to the local culture and environment
- Embedded in community practices, institutions, relationships and rituals
- Held by individuals or communities
- Dynamic and changing

Local knowledge is not confined to tribal groups or to the original inhabitants of an area. It is not even confined to rural people. Rather, all communities possess local knowledge – rural and urban, settled and nomadic, original inhabitants and migrants. There are other terms, such as *traditional knowledge* or *indigenous knowledge*, which are closely related, partly overlapping, or even synonymous with local knowledge. The term *local knowledge* seems least biased in terms of its contents or origin. As it embraces a larger body of knowledge systems, it includes those classified as *traditional* and *indigenous*.

## [Box 1] LOCAL, TRADITIONAL AND INDIGENOUS KNOWLEDGE

**Local knowledge** is a collection of facts and relates to the entire system of concepts, beliefs and perceptions that people hold about the world around them. This includes the way people observe and measure their surroundings, how they solve problems and validate new information. It includes the processes whereby knowledge is generated, stored, applied and transmitted to others.

The concept of **traditional knowledge** implies that people living in rural areas are isolated from the rest of the world and that their knowledge systems are static and do not interact with other knowledge systems.

**Indigenous knowledge** systems are often associated with indigenous people thus rather limiting for policies, projects and programmes seeking to work with rural farmers in general. Furthermore, in some countries, the term *indigenous* has a negative connotation, as it is associated with backwardness or has an ethnic and political connotation.

Sources: Warburton and Martin (1999) and FAO Web site for Gender, Agrobiodiversity and Local Knowledge

Knowledge systems are dynamic, people adapt to changes in their environment and absorb and assimilate ideas from a variety of sources. However, knowledge and access to knowledge are not spread evenly throughout a community or between communities. People may have different objectives, interests, perceptions, beliefs and access to information and resources. Knowledge is generated and transmitted through interactions within specific social and agro-ecological contexts. It is linked to access and control over power. Differences in social status can affect perceptions, access to knowledge and, crucially, the importance and credibility attached to what someone knows. Often, the knowledge possessed by the rural poor, in particular women, is overlooked and ignored.

## [Box 2] WILD-FOOD PLANTS IN SOUTHERN ETHIOPIA

The rural people of Ethiopia are endowed with a profound knowledge of the use of wild plants. This is particularly true for medicinal and wild plants, some of which are consumed during drought, war and other hardship. Elders, and other knowledgeable community members, are the key sources or reservoirs of plant knowledge. Wild-food consumption is still very common in the rural areas of Ethiopia, particularly for children. Among these, the most common wild plant fruits consumed by children, are from the plant species *Ficus spp.*, *Carissa edulis* and *Rosa abyssinica*.

The consumption of wild plants seems to be more common and widespread in food insecure areas, where a wide range of species are consumed. The linkage has given rise to the notion of famine-foods, plants that are eaten only at times of food stress and that are therefore an indicator of famine conditions. Local people know of the importance and the contribution that wild plants make to their daily diet. Also, they know of the possible health hazards, such as an upset stomach that may occur after eating certain wild plants.

For example, *Balanites aegyptiaca* (*bedena* in Amharic), an evergreen tree, about 10 to 20 m tall, is typical of this category. Children eat its fruit at any time when ripe, when there are food shortages they will be eaten by adults. The new shoots, which are always growing during the dry season, are commonly used as animal forage. Although, during food shortages, people cut the newly grown succulent shoots and leaves, which are cooked like cabbage. People in the drought-prone areas of southern Ethiopia also apply these consumption habits to the fruits and young leaves of *Solanium nigrum* (black nightshade), a small annual herb, and *Syzygium guineense* (waterberry tree), which is a dense, leafy forest tree around 20 m tall.

In parts of southern Ethiopia, the consumption of wild-food plants seems to be one of the important local survival strategies. This appears to have intensified because of repeated climatic shocks that have hampered agricultural production, leading to food shortages. Increased consumption of wild-foods allows people to better cope with erratic, untimely rains. They are able to face several consecutive years of drought, without facing severe food shortages, famine and general asset depletion, as is the case in other areas of Ethiopia. The key to this survival strategy is the collection and consumption of wild plants. These are found in uncultivated lowland areas such as bush, forest and pastoral land. In the more densely populated, and intensively used mid- and highlands, a great variety of these indigenous plants and trees have been domesticated for home consumption and medicinal use. Southern Ethiopia, particularly Konso, Derashe and Burji special *weredas*[1] and parts of the southern nations, nationalities and people's region (SNNPR) may still be considered part of these biodiversity hot-spots in Ethiopia.

Source: Guinand and Lemessa, 2000.

Local knowledge is unique to every culture or society; elders and the young possess various types of knowledge. And, women and men, farmers and merchants, educated and uneducated people all have different kinds of knowledge.

- **Common knowledge** is held by most people in a community; e.g. almost everyone knows how to cook rice (or the local staple food).
- **Shared knowledge** is held by many, but not all, community members; e.g. villagers who raise livestock will know more about basic animal husbandry than those without livestock.
- **Specialized knowledge** is held by a few people who might have had special training or an apprenticeship; e.g. only few villagers will become healers, midwives, or blacksmiths.

[1] The basic administration unit in Ethiopia, equivalent to a district.

The type of knowledge people have is related to their age, gender, occupation, labour division within the family, enterprise or community, socio-economic status, experience, environment, history, etc. This has significant implications for research and development work. To find out what people know, the right people must be identified. For example, if boys do the herding they may know, better than their fathers, where the best grazing sites are. If we ask the fathers to show us good pastures, we might only get partial information. Development professionals sometimes think villagers know very little, when in fact the wrong people have been interviewed.

It is important to realize that local knowledge – as with other types of knowledge – is dynamic and constantly changing, as it adapts to a changing environment. Because local knowledge changes over time, it is sometimes difficult to decide whether a technology or practice is local, adopted from outside, or a blend of local and introduced components. In most cases the latter situation is most likely. For a development project, however, it does not matter whether a practice is really local or already mixed with introduced knowledge. What is important before looking outside the community for technologies and solutions, is to look first at what is available within the community. Based on this information, a decision can be made on the type of information that would be more relevant to the specific situation. Most likely, it will be a combination of different knowledge sources and information types.

This again has important implications for the research and development process. It is not sufficient to document existing local knowledge. It is equally important to understand how this knowledge adapts, develops and changes over time. How this knowledge is communicated is also significant, and by whom, both within and beyond the community.

## WHY IS LOCAL KNOWLEDGE IMPORTANT?

Local knowledge is the human capital of both the urban and rural people. It is the main asset they invest in the struggle for survival, to produce food, provide for shelter or achieve control of their own lives. Significant contributions to global knowledge have originated with local people, for instance for human and veterinary medicine. Local knowledge is developed and adapted continuously to a gradually changing environment. It is passed down from generation to generation and closely interwoven with people's cultural values.

In the emerging global knowledge economy, a country's ability to build and mobilize knowledge capital is as essential to sustainable development as the availability of physical and financial capital. The basic component of any country's knowledge system is its local knowledge. This encompasses the skills, experiences and insights of people, applied to maintain or improve their livelihood.

Today, many local knowledge systems are at risk of becoming extinct. This is because globally natural environments are rapidly changing, and there are fast-paced economic, political, and cultural changes. Practices vanish, when they are inappropriate, in the face of new challenges, or because they adapt too slowly. However, many practices disappear because of the intrusion of foreign technologies, or development concepts, that promise short-term gains or solutions to problems. The tragedy of the impending disappearance of local knowledge is most obvious to those who have developed and make their living from it. A case in point is the wild-food example from southern Ethiopia (see Box 2). These plants are especially vital for the survival of the poor, during food shortages, when there are no other means of satisfying basic needs. Moreover, the implication for others may also be detrimental, when skills, technologies, artifacts, problem-solving strategies and expertise are lost. Local knowledge is a part of people's lives. Especially, the poor depend, almost entirely, for their livelihoods on specific skills and knowledge essential to their survival. Accordingly, for the development process, local knowledge is of particular relevance to the following sectors and strategies:

- **Agriculture**, knowledge related to crop selection, intercropping, planting times.
- **Animal husbandry and ethnic veterinary medicine**, knowledge of breeding strategies, livestock characteristics and requirements, plant uses to treat common illnesses.
- **Use and management of natural resources**, knowledge of soil fertility management, sustainable management of wild species.
- **Health care**, knowledge of plant properties for medicinal purposes.
- **Community development**, common or shared knowledge provides links between community members and generations; and
- **Poverty alleviation**, knowledge of survival strategies based on local resources.

Conventional approaches imply that development processes always require technology transfers from places that are perceived to be more advanced. This practice has often led to overlooking the potential of local experiences and practices. The following example from Ethiopia's food security programme illustrates what may happen if local knowledge is not adequately considered (see Box 3).

### [Box 3] INTRODUCTION OF SORGHUM VARIETIES IN ETHIOPIA

Higher yielding sorghum varieties were introduced into Ethiopia to increase food security and income for farmers and rural communities. When weather and other conditions were favourable, the modern varieties proved a success. However, in some areas complete crop failures were observed, whereas local varieties, with a higher variance of traits, were less susceptible to the frequent droughts. The farming community considered the loss of an entire crop to be more than offset by the lower, average yields of the local variety that performed under more extreme conditions. An approach, that included local farming experience, could have resulted in a balanced mix of local and introduced varieties, thus reducing the producers' risk.

Source: Oduol, 1995.

Local knowledge is relevant at three levels of the development process.

- Obviously, it is most important to men and women, old and young, in the local community where the bearers of such knowledge live and produce.

- Development agents (CBOs, NGOs, governments, donors, local leaders and private sector initiatives) need to recognize, value and appreciate local knowledge in their interaction with the local communities. They need to understand exactly what it is before it is incorporated in their approaches. They also need to critically validate it against the usefulness of their intended objectives.

- Finally, local knowledge forms part of global knowledge. In this context, it has a value and relevance in itself. Local knowledge can be preserved, transferred, or adopted and adapted elsewhere.

However, it is important to stress that local knowledge is not exclusive or necessarily sufficient for tackling the challenges people face today. Much evidence shows that local actors seek information and concepts from wherever they can in their efforts to solve their problems and achieve their goals. For people involved in research and development processes, with local communities, it is important to see local knowledge as one component within a more complex innovation system. Therefore, a thorough analysis of existing sources of information and knowledge is an important step in any research or development project. These sources, by nature, can be formal and informal. For instance, community groups, involved in similar agricultural practices, could be an informal source of local knowledge. Regional, or national, extension or research centres would be a formal source of knowledge. In this context, it is important to consider private service providers, such as local seed retailers, as they are becoming increasingly important as knowledge providers.

## Key points

- Local knowledge is developed over time by people living in a given community, and is continuously developing.
- Knowledge systems are dynamic, people adapt to changes in their environment and absorb and assimilate ideas from a variety of sources.
- Knowledge and access to knowledge are not spread evenly through a community or between communities; people have different objectives, interests, perceptions, beliefs and access to information and resources.
- The type of knowledge people have is related to their age, gender, occupation, labour division within the family, enterprise or community, socio-economic status, their experience, environment, history.
- Local knowledge is the human capital of the rural and urban people, it is the main asset they invest in the struggle for survival, to produce food, provide for shelter or achieve control of their own lives, and
- For those involved in research and development processes, with local communities, it is important to see local knowledge as one component within a more complex innovation system.

### References

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### Web sites

FAO Web site for Gender, Agrobiodiversity and Local Knowledge: www.fao.org/sd/links

World Bank Web site on indigenous knowledge: www.worldbank.org/afr/ik/what.htm

### Additional background papers

Mujaju, C., Zinhanga, F. & Rusike, E. 2003. Community seed banks for semi-arid agriculture in Zimbabwe. *In* Conservation and sustainable use of agricultural biodiversity. Manila, CIP-UPWARD in partnership with GTZ, IDRC, IPGRI and SEARICE.

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