

Glossary of Relevant Terms

This glossary contains definitions for a selected number of terms used in the articles of the sourcebook. The glossary includes broader concepts and terms which can be easily misunderstood. It should not be considered as a comprehensive glossary for upland resource management. Whenever possible, examples have been added to help clarify the definitions.

Action research: dynamic research that follows an ongoing cycle of understanding a situation, identifying the problems/opportunities, developing solutions, planning, implementing, reviewing and reflecting, understanding the situation... *Example: the farming systems research conducted at NAFRI belongs to a category of "action research".*

Agrarian system: an historically constituted mode of exploitation of the environment, durably adapted to the bioclimatic conditions of a given area and corresponding to social conditions and needs at that moment (Mazoyer, 1985). *Example: the cash-crop oriented agrarian system of southern Sayaboury that has been evolving through growing links with the Thai agro-processing industry.*

Agricultural production system: this is the whole structured set of plants, animals and other productions or activities selected by a farmer for his production unit to realize his objectives. *Example: the agricultural production system of farmers on the Boloven plateau that is based on coffee production combined with some domestic animals and some food crops.*

Agro-ecosystem: an ecological system partly modified by man to produce food, fiber, and/or other agricultural products. It is an agricultural-socio-economic-ecological system (Conway et al. 1987). *Example: the swidden agroecosystem of Ban Semoun, a village of Sepone district in Savannakhet province.*

Agro-ecosystem analysis (AEA): AEA is a methodology for zoning and analysing agricultural systems in order to plan and prioritise research and development activities in the fields of agriculture and natural resource management. It uses a holistic or systems approach to gather bio-physical and socio-economic information and to identify key issues or problems within the ecosystem that will be useful for rural development, extension and research programs.

Agro-enterprise development approach: it is an approach that links small farmers to expanding markets so they can develop sustainable livelihoods in the rural sector. The emphasis is on helping producers and traders identify strengths and weaknesses in the market chains in which they are involved.

Animal husbandry system (or "livestock system"): techniques and practices applied by a community in a given space, for the exploitation of plant resources by animals, in conditions that are compatible with the community's objectives and adapted to the constraints of its environment. *Example: the animal husbandry systems of most upland villages are characterised by a combination of managing small and large livestock (poultry, pigs, cattle and buffalo).*

Applied research: applied agricultural research aims to solve farmers' problem by taking existing technologies coming from "basic research" and tailoring them to defined groups of farmers in defined areas. *Example: introducing and testing improved rice varieties from abroad in farmer's fields of Northern Laos.*

Basic research: explores new frontiers of science, and develops new theories and research methodologies. Its major objective is to improve the scientific understanding of subject matter areas rather than develop techniques to solve practical problems. *Example: the study of the evolution of cattle races in Asia.*

Biodiversity: the total diversity of plants and animals living in the same area. *Example: in agricultural landscapes of Laos, biodiversity is generally higher in the more traditional upland areas than in the more modern lowland areas.*

Bio-physical: related to both biological and physical features (often used as opposed to socio-economic features). *Example: the bio-physical elements influencing agricultural production comprise both biotic (living) and abiotic (non-living) factors.*

Business Development Services (BDS): BDSs are small businesses, which enhance the effectiveness of a market chain by assisting other businesses operate and improve their efficiency.

Capacity building: the term capacity is defined as the ability of individuals and organizations to perform functions effectively, efficiently and in a sustainable manner. Capacity building and capacity development are often used as synonyms. Capacity development is the process by which individuals, groups, organisations and institutions strengthen their ability to carry out their functions and achieve desired results over time. It is a process of improving the ability of organisations and systems to perform their assigned tasks in an effective, efficient and sustainable manner. It involves strengthening the capabilities of individuals, organisations and linkages among them.

Community Based Tourism (CBT): is tourism that takes environmental, social and cultural sustainability in account. It is managed and owned by the community, for the community, with the purpose of enabling visitors to increase their awareness and learn about community and local ways of life.

Cropping system: this is a sub-system of the whole Agricultural Production System, defined for a given cultivated area and treated homogeneously with regard to the crops and their successions, and the itineraries of techniques. *Example: upland rice-based cropping systems are the most common cropping systems observed throughout the Lao uplands.*

Cultural practices: elementary action of an itinerary of techniques. Action of farmers on the environment and/or on crops in a process of plant production. *Example: weeding is often considered as the most time-consuming cultural practice in the itinerary of techniques of swidden farmers.*

Diagnosis: investigation or analysis of the cause or nature of a condition, situation or problem. *Example: an agronomic diagnosis can be conducted in an upland rice field by digging several cultural profiles and relating all field observations to bio-physical factors, farmer's cultural practices and the scientific concepts of the rice yield components in order to reconstitute the specific history of that rice crop and diagnose its possible problems.*

Ecosystem: the communities of plants and animals (including humans) living in a given area and their physical and chemical environment (e.g. air, water, soil), including the interactions between them and with their environment. It is a system which includes all the organisms of an area and the environment in which they live. *Example: Vientiane wetlands are examples of lowland ecosystems that have been shaped by humans.*

Entrusting (livestock): 'entrusting animals' (or 'confiage animal' in French) is a form of livestock revolving fund during which a female cattle or buffalo is successively entrusted to different poor families of the same village, under certain conditions and for a certain period in order to increase animal production through birth. When the cow delivers a calf, the family entrusted with the cow can keep the calf but must transfer the mother cow to another family, and so on.

Ethnoscience: ethnoscience or cognitive anthropology is used in the context of understanding farmers. It is the study of people's perception of their surroundings as reflected in their use of language. It is also an organised examination of thought across culture, modeled after the principles of linguistics, specifically, phonetic analysis. *Examples: ethnoscientific studies have been successfully used throughout the world in ethnobotany, ethnopedology, ethnoforestry, ethnoveterinary medicine and ethnoecology.*

Experiential learning: learning related to or derived from experience.

Extension: agricultural extension is a process for which the primary goal is to assist farming families in adapting their production and marketing strategies to rapidly changing social, political and economic conditions so they can, in the long term, shape their lives according to their personal preferences and those of the community. The task of extension is, thus, to improve interactions among actors involved in agricultural knowledge so that farmers have optimum access to any information that could help them enhance their economic and social situation.

Fallow period: in a shifting cultivation cycle, it is the duration during which a field is left to plant regrowth, from harvesting to replanting. *Example: in traditional shifting cultivation, a fallow period of ten years generally results in better yields for rice than a fallow period of only three years.*

Farming system: farming is defined as the practice of cultivating the land or raising stock. A system is a set of elements contained within a boundary such that they have strong functional relationships with each other. A farming system is thus an agricultural system composed of various sub-systems and various categories of farming systems could be defined according to the relative importance of each sub-system.

Focus groups: People who share particular sets of interests or have common characteristics, i.e. single mothers, dry rice farmers. Groups of people are convened to discuss topics or answer questions prepared by researcher.

Food security: the concept of producing enough food for the whole household to live healthily, whatever the weather or situation. Food security could be studied at different levels (household, village, district, province and national levels).

Gender: refers to social attributes that are learned when growing up as a member of a community. *Example: in remote villages, boys and men often learn how to hunt for the family while girls and women often learn how to prepare meals for the family.*

Group meetings: Village meetings which allow all types of people in an area to come together to collectively discuss ideas.

Household: is a group of people who live and eat together and typically engage in joint economic activity. This group is usually based on kinship and in Laos is normally comprised of the nuclear or stem family. Nuclear family is father, mother and children. In Laos, stem family = nuclear family + surviving members of the grandparental generation. Other household groupings are rare.

Indigenous knowledge: is the local knowledge that is unique to a given culture or society. It contrasts with the international knowledge system generated by universities, research institutions and private firms. It is the basis for local-level decision making in agriculture, health care, food preparation, education, natural resource management, and a host of other activities in rural communities. *Example: the indigenous knowledge that many lowland Lao farmers already have in traditional irrigated rice production techniques has been an asset for the expansion and modernisation of irrigated rice production in Lao PDR during the last decades.*

Integrated fruit tree systems: a fruit-tree based cropping system where fruit culture is well integrated into a broader agricultural production system. *Example: some upland farmers of Luang Prabang province have integrated fruit tree cultivation into their production system for income generation.*

Integrated Pest Management (IPM): IPM is an ecosystem-based management strategy used in plant protection that focuses on long-term prevention of pests and their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant cultivars. In IPM pesticides are used only when needed as determined by established guidelines.

Itinerary of techniques: in agronomy, it is a logical and well-ordered succession of techniques (or "cultural practices") performed on one plot for a given crop. *Example: the itinerary of techniques of a swidden farmer consists of a succession of cultural practices (cutting, burning, sowing, weeding, etc.) performed to produce upland rice and associated crops in his/her field.*

Intercropping: growing two or more crops in the same field at the same time in a mixture (Also known as "mixed cropping" or "multiple cropping", as opposed to "monocropping" where only one crop is grown). *Example: intercropping upland rice with various other crops (maize, cassava, chillies, watermelon, sesame, etc.) is widely practiced in the Lao uplands. The possibility of intercropping is an advantage of upland rice compared to irrigated rice.*

Land allocation: a process that provides land tenure entitlements to families. Land allocation is generally performed towards the end of land use planning and land use zoning processes.

Land-use plan: a "Land Use Plan" could be defined as a spatial arrangement of land uses and a proposed course of government action to influence land use. It is also defined as a collection of policies and maps that serve as a community's blueprint for growth. In general terms, it is also defined as the official statement of a legislative body which sets forth its major policies concerning desirable physical development.

Land-use planning: an activity generally conducted by a local government, which provides public and private land-use recommendations consistent with community policies and is generally used to guide decisions on zoning. It is also considered as a systematic attempt to minimise the adverse effects land changes have on society and environments and to maximise human benefits. Alternate definition: the systematic assessment of land and water potential, alternative patterns of land use and other physical, social and economic conditions, for the purpose of selecting and adapting land-use options which are most beneficial to land users without degrading the resources or the environment, together with the selection of measures most likely to encourage such land uses. Land-use planning may be at international, national, district (project, catchment) or local (village) levels. It includes participation by land users, planners and decision-makers and covers educational, legal, fiscal and financial measures.

Land-Use Planning/Land Allocation (LUP/LA): consists of the entire process of land use planning and land allocation.

Land-use zoning: in Laos, during a LUP/LA process, it is an activity that serves to delineate forest and agricultural land use categories that contribute to a satisfactory village livelihood system, while offering potential for retaining current forest cover levels.

Livelihood: can simply be defined as the way people make a living. A livelihood comprises the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities both now and in the future, while not undermining the natural resource base.

Livelihood approaches: research and development approaches based on the concept of livelihood. *Example: the Sustainable Livelihood Approach (SLA) used by some donor agencies.*

Local Ecological Knowledge: is the knowledge based on local peoples' ideas and beliefs and traditional knowledge of their environment.

Lodging: falling over of a plant because of a) wind or b) too heavy or c) too much nitrogen. *Example: tall traditional lowland rice varieties are often subject to lodging (and thus falling down in the field), if given too much nitrogen. On the contrary, improved short-stemmed rice varieties are more resistant to lodging even when high doses of nitrogen are applied.*

Microfinance: The term microfinance refers to the provision of a broad range of financial services (savings and credit) to poor and low-income households and their microenterprises. These financial services may generally include deposits, loans,

payment services and insurance. Microfinance services are provided by three type of sources: formal institutions, such as rural banks and cooperatives; semiformal institutions, such as nongovernment organisations; and informal sources such as money lenders and shopkeepers. Institutional microfinance is defined to include microfinance services provided by both formal and semiformal institutions. Microfinance institutions are defined as institutions whose major business is the provision of microfinance services.

Migration: with specific reference to rural or village migration, it is defined as the movement of people from one settlement to another. Migrations could be temporary (seasonal) or permanent. *Examples: some young rural people prefer to migrate to urban centres after completing their studies. In Lao PDR, several highland villages have permanently moved down to the lowlands.*

Monoculture: system of cultivation where only one crop is grown on the same piece of land over a period of years. Also known as "monocropping". *Example: rainfed lowland rice is grown as a monoculture.*

National Protected Area (NPA): NPA is the more modern term for the 'National Biodiversity Conservation Areas' (NBCAs) designated by the Lao government. The government has announced that they prefer the English translation to be NPA. *Example: the Phou Den Dinh, located in Phongsaly province, is the northernmost NPA of Lao PDR.*

Nematodes: also known as eelworms, tiny thread-like worms; some live in the soil and can damage plant roots.

Non-Timber Forest Product (NTFP): the term NTFP encompasses all biological materials other than timber which are extracted from forests for human use (edible plants, non-edible plants, medicinal plants, edible animal products and non-edible animal products). The term Non-Wood Forest Product (NWFP) is also sometimes used. *Examples: wild cardamom, wild paper mulberry, broom grass, orchids, mushrooms, bamboo shoots, bamboo rats are among the many NTFPs found throughout the Lao uplands.*

Over-harvesting: taking more of a product than is sustainable. *Example: in the Lao PDR, some species of large birds such as the Green Peafowl that were common in the past are now only found in small numbers because they have been over-harvested for many years following widespread hunting practices.*

Participatory development: involving people in diagnosing their situation and problems, planning and deciding courses of action, implementing agreed upon tasks, monitoring, evaluation and sharing the benefits as well as responsibilities of joint action.

Participatory methods: allow stakeholders to interact and build a kind of partnership which allows better understanding of the important elements, dynamics, problems and opportunities of local communities.

Participatory Rural Appraisal (PRA): is a practical research and planning approach that supports decentralised planning and democratic decision-making. A PRA values social diversity, community participation and empowerment. The main objective of PRA is to improve a target communities' understanding of their own situation and environment. This sets the stage for participatory planning for conservation and development activities.

Pioneering shifting cultivation: a form of shifting cultivation that involves the periodic movement of a group or village into a new forest area (often a primary forest area).

Poverty: in the Lao PDR, according to Prime Ministerial Instruction No 10 on poverty reduction, poverty has been defined as "the lack to fulfil basic human needs such as: not having enough food (i.e. less than 2,100 calories per day/capita), lack of adequate clothing, not having permanent housing, not capable of meeting expenses for health care, not capable of meeting educational expenses for one's self and other family members, and lack of access to transport routes".

Production forestry: a category of forest used for production of various commodities, for example timber.

Rotational cropping: repeated cultivation of a succession of crops (also known as "crop rotations"), possibly in combination with fallow, on the same field. *Example (of Southern Xayabury): growing upland rice in year 1, followed by maize in year 2 and then groundnut in year 3.*

Rotational shifting cultivation: a form of shifting cultivation that involves a sedentary village which rotates the cultivation of its fields.

Savannisation: conversion of a swidden field into a savanna due to the invasion of invasive grasses that drive out other species.

Semi-structured interview: a relatively flexible type of interview used during field surveys. The interviewer uses a checklist of topics and questions but, depending on the interviewee, not everyone will be asked the same question.

Shifting agriculture: see "shifting cultivation".

Shifting cultivation: a form of agriculture in which soil fertility is maintained by rotating fields rather than crops. A piece of land is cropped until the soil shows signs of exhaustion or is overrun by weeds, when the land is left to regenerate naturally while cultivation is done elsewhere. Also known as swidden agriculture and slash-and-burn cultivation.

Shifting cultivation stabilisation: term referring to the Lao government programme to reduce and control shifting cultivation. The aim is to sedentarize villages, gradually modify and intensify agriculture production to ensure its long-term sustainability under growing population pressure. To this end the Lao government recognizes two types of shifting cultivation: rotational and pioneering shifting cultivation. The government's priority is to halt pioneering shifting cultivation or the uncontrolled clearance of primary and new forest areas. This does not apply to productive secondary forest that are part of rotational shifting cultivation-NTFP production systems in permanent villages where land has been officially allocated.

Slash-and-burn cultivation: see 'shifting cultivation'.

Sustainable: that can continue or be continued for a long time. Also, involving the use of natural products and energy in a way that does not harm the environment.

Sustainable development: development that meets the needs of the people today without compromising the ability of future generations to meet their own needs. Development involves a progressive transformation of economy and society. Sustainable development is also defined as maintaining a delicate balance between the human need to improve lifestyles and feeling of well-being on one hand, and preserving natural resources and ecosystems, on which we and future generations depend.

Swidden agriculture: see 'shifting cultivation'.

Swidden cultivation: see 'shifting cultivation'.

Swidden or swidden field: a field under shifting cultivation.

System: a set of elements contained within a boundary such that they have strong functional relationships with each other. *Examples: a farming system, a cropping system, an agroecosystem.*

Terrestrial: living on or found on the ground. Example: the wild boar is a terrestrial animal species.

Transect: a straight line placed on the ground along which ecological measurements are taken. *Example: when studying a village agro-ecosystem a "transect walk" could be performed by an observer along an imaginary line passing through the entire length of that village territory. Various landscape units would then be identified, described and illustrated in a sketch diagram (often called the "transect") that would help understand the various land-use units found in that village territory.*

Transect walks: a combination of interview and observation as researchers walk through an area with their interviewee and ask about what is seen.

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