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ECHO Development Notes

LOCAL CHICKEN HEALTH MANAGEMENT

This article presents information on poultry diseases and a range of remedies for coping with those diseases based on local chicken production and health management practices in West Africa.

CASE FOR ACTION IN INDIGENOUS LOCAL KNOWLEDGE PRESERVATION

This article explores possibilities for ILK interaction with cultural communities and biodiversity hotspots, potential benefits of this effort, and ultimately calls to action workers who have proximity and trust networks.

THE LIGHT WHEEL TOOLKIT: BRINGING HOLISTIC COMMUNITY DEVELOPMENT TO LIFE

The Light Wheel defines nine different aspects of wellbeing. This article introduces the Light Wheel and guides you to resources for how you might apply this tool in your own work.

Upcoming Events

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Local Chicken Health Management

ECHO West Africa Staff

Figure 1. Local chicken flock in West Africa. *Source:* ECHO West Africa

Introduction

Diversifying income sources improves the economic resilience of small-scale farmers. Raising local chickens stands out as a potentially profitable option for diversifying income that integrates well into traditional livelihoods. Resilient, undemanding, and well adapted to local climatic conditions, these birds play a crucial role in the food security of rural households while also constituting a regular source of income.

However, climate change, especially extreme heat, violent drafts, high humidity, and flooding during the rainy season, are sources of many diseases. The lack of health monitoring and technical skills prevents many producers from fully benefiting from raising chickens. In this article, we present information on poultry diseases and a range of remedies for coping with those diseases.

General Symptoms Observed in Sick Poultry

Daily animal monitoring enables early detection of disease signs, adaptation of treatments, and prevention of epidemics. It is important, therefore, for you to recognize a sick bird in the flock. Diagnosis is relatively easy. Some behaviors you will observe of a sick hen include:

- At rest: she is drowsy, sad, and/or listless.
- In motion: she hesitates to move, her gait is sluggish, unsteady, with limping, staggering, or disorganized movements.
- With respect to appetite: she eats little or does not eat at all.
- With respect to general appearance: feathers are ruffled and unkempt, tremors, nasal, oral, and ocular (eye) discharge.

Examine the body and mucous membranes (nasal, ocular, oral, and anal) of the chicken. This is a good way to detect diseases such as:

- Skin issues: lice, fleas, ticks, cyanosis (unhealthy discoloration) of the comb, and wattles (dark to purple appearance).
- Respiratory issues: nasal discharge, coughing, rattling (noisy breathing).
- Eye issues: conjunctivitis and other eye lesions.
- Digestive issues: diarrhea which can have yellow, green or black color, be bloody, or foul-smelling.
- Nervous system issues: nervous disorders (loss of coordination of movements, torticollis,[1] falls).

If possible, a veterinary or similar community animal health specialist should visit the poultry operation once every two weeks.

Major Poultry Diseases (Table 1)

Vaccinating chicks from the first days after hatching is essential to protect them against common infectious diseases such as Newcastle disease (Figure 2a), avian pox (Figure 2b), or infectious bronchitis. Additionally, you can prevent and/or treat many poultry diseases through plant-based remedies described below.

[1] Torticollis in poultry is also called wry neck and looks like involuntary twisting or tilting head movements. It is caused by neurological issues, trauma, infections, poor genetics, or nutritional deficiencies. Torticollis often coincides with difficulty walking, general lack of movement, and poor balance.

Table 1. The most common viral, bacterial, and parasitic diseases in poultry farming in West Africa along with common symptoms, treatments, and prevention mechanisms.

Disease	Affected poultry	Symptoms	Treatment	Prevention
Viral Diseases				
Newcastle Disease (Avian Pseudoplague)	Chickens, turkeys, rarely guinea fowl	Acute: sudden death (90–95%), few symptoms	None	Vaccination
Gumboro Disease	Chicks (3–6 weeks)	Ruffled feathers, weakness, whitish diarrhea, high mortality, growth remains stunted	Antibiotics (to treat secondary infections) + kidney-protective drugs	Vaccination
Avian Pox	Chickens, guinea fowl, turkeys, pigeons	Scabs on beak, comb, eyes, wattles	Ointment + antibiotics (to treat secondary infections)	Vaccination
Bacterial Diseases				
Pasteurellosis (Avian Cholera)	All poultry (ducks most sensitive)	Acute: rare in young birds Subacute: green foul diarrhea, sneezing, bluish comb/wattles	Antibiotics	Vaccination
Salmonellosis	All poultry	Chicks: sticky yellow diarrhea, high mortality Adults: gray-yellow diarrhea, weakness, thirst	Antibiotics, vitamins, amino acids, minerals	Vaccination
Parasitic Diseases				
Coccidiosis (Figure 2c)	All poultry	Weakness, weight loss, bloody diarrhea, anemia; intestinal blood clots	Anticoccidial drugs	Biosecurity, regular disinfection of coops, feeders, and waterers
Internal Parasites	All poultry	Weakness, weight loss, diarrhea/constipation, anemia	Dewormers	Keep litter dry and/or replace when it gets wet
External Parasites	All poultry	–	Sprays/powders applied to birds and housing	Avoid overcrowding

Figure 2. Examples of viral (A:Newcastle disease and B:Avian Pox) and parasitic (C: Coccidoses) poultry diseases. *Sources*: Lucien Mahin (A: GNU Free Documentation License and C: CC SA), Roman Halouzka (B: GNU)

Natural remedies against diseases

Many plants are traditionally used in poultry production. In West Africa, these include moringa, African mahogany, vernonia, neem, garlic, amaranth, nettles, eucalyptus, thyme, lemongrass, basil, mint, ginger, baobab, and combinations of these plants. They are used in

preventive or curative ways for respiratory diseases, digestive problems, deworming, immune support, and general bird health. The following natural remedies combine indigenous knowledge and practical experience in West Africa. Rigorous scientific evidence is not available to support the effectiveness of all of these treatments. The lack of scientific evidence is likely due to these remedies being under-researched; further study will potentially validate local experience. We recommend following veterinary advice alongside these natural remedy options.

Moringa (*Moringa oleifera*)

Moringa is a very effective plant for the prevention and treatment of diseases. Moringa leaves are a nutrient-rich supplement that provide protein, vitamins, minerals, and antioxidants. When included at low levels in poultry feed (up to around 5% of diet), they support growth, egg quality, and general health, and help birds cope with stress or toxin exposure. However, moringa does not replace vaccination or veterinary treatment, and high inclusion rates can reduce feed intake and performance (Mahfuz and Piao, 2019).

The fresh leaves are harvested from the trees, then sorted, washed, and dried in shade. To obtain moringa powder, grind dried leaves finely. Dry the same day. Put moringa powder in the poultry's water every day. Ensure that the animals eat well (especially chicks) before drinking moringa water. We recommend 30 ml (2 tablespoons) of moringa powder per 1 L of drinking water, to be renewed up to three times per week.

African mahogany (*Khaya senegalensis*)

The bark of *Khaya senegalensis* has some evidence of effectiveness against internal parasites in sheep (Ademola *et al.*, 2004). This has been backed up by practical experience in raising poultry. Clean and soak African mahogany bark in water for three days, and then give the solution once or twice a week to poultry as a preventive measure. For monthly deworming, boil the bark in water and serve it to chickens after it is fully cooled. Allow the chickens to become thirsty before providing it because the solution is very bitter.

Vernonia (*Vernonia amygdalina*)

Vernonia leaves have antibiotic properties that help fight bacteria (Tobia and Ohimain, 2024). To prepare an oral treatment, crush leaves in clean water. Then allow the chickens to become thirsty before giving it to them because Vernonia is a very bitter plant, and the birds need to be thirsty to encourage consumption. We recommend offering it once a month as a preventative health practice. To treat external infections such as scabies, for example, mix Vernonia leaves with potash, salt, and palm oil. Then scrape the affected areas with a stone across the body before applying the solution over the wounds.

Neem (*Azadirachta indica*)

Neem has been used for millennia in a traditional Hindu medicine. Modern research has confirmed its numerous healing properties for humans, animals, and plants. Neem leaves and seeds contain natural substances that are antiparasitic (Saha *et al.*, 2015; Abdel-Ghaffar et al., 2008), antibacterial and anti-inflammatory (Hegazy *et al.*, 2024), and they also provide some antioxidants that support the bird's health (Torun Kumar *et al.*, 2020). Neem eaten or drunk by poultry can help reduce internal worms

and support gut and respiratory health. Neem sprayed onto birds can help control certain external parasites such as poultry red mite.

To prepare a liquid solution of neem, crush 1kg of neem leaves, then mix 5 L of water and let the mixture sit before straining (Figure 3). Give the resulting preparation as drinking water for 5 consecutive days to your chickens. It is not recommended to keep the solution for more than 24 hours. For this reason, crush only the amount needed for daily use. Alternatively, mix 1 kg crushed neem leaves directly with 10 kg of feed and serve it to the chickens. Another tip is to boil a handful of neem leaves in 1 L of water, let it cool to lukewarm, and give it to poultry for 2 to 3 days to treat intestinal worms.

Figure 3. Crushing neem leaves (top) and neem solution being strained (bottom).
Source: ECHO Staff

Garlic (*Allium sativum*)

Garlic is a traditional medicinal plant widely used in village poultry. When given in small amounts in feed or drinking water, it can support digestion, improve growth and feed conversion, and help reduce harmful bacteria in the gut (Abd El-Ghany, 2024; PoultryDVM, 2026). Research also shows that garlic has antiviral and immune stimulating properties and can help birds cope with some infections (Adjei-Mensah, 2023). Garlic extracts can also help repel or reduce external parasites such as red mite when used in sprays.

Give poultry garlic infused water at least once a month as a preventative health practice. Mixing garlic with drinking water ensures that all the poultry consume it in a satisfactory dose. For prevention of respiratory diseases, mix 1 crushed clove of garlic with 1 L of water and give it to the poultry to drink.

Amaranth (*Amaranthus* spp.)

Amaranth promotes good development of chicks and excellent condition of adults. It is rich in protein, minerals, vitamins, and trace elements.

Wild Nettle (*Laportea aestuans*)

Nettle is an excellent remedy for fighting internal infections. The plants are rich in iron, calcium, magnesium, potassium, as well as vitamins A and C. They strengthen the immune system of poultry and help them stay healthy.

Eucalyptus (*Eucalyptus globulus*)

Eucalyptus (*Eucalyptus globulus*) leaves contain essential oils with antibacterial and anti inflammatory properties (El Shiekh *et al.*, 2025). In village poultry systems, you can offer a light infusion of eucalyptus leaves occasionally as a preventative and supportive remedy for birds with respiratory illness. Infuse a handful of eucalyptus leaves in 1 L of hot water then let it cool before giving it to poultry to drink.

Thyme (*Thymus vulgaris*)

Thyme is an aromatic herb. Thyme leaves contain compounds with strong antibacterial, antifungal, antioxidant, and mild anti-inflammatory properties. In poultry, thyme extracts and essential oils have been shown to reduce some harmful bacteria, support antioxidant status, and help birds cope with heat stress and diseases (Saied *et al.*, 2025). You can use small amounts of thyme as a supportive remedy for digestive issues, mild respiratory problems, and as a general tonic.

Feed fresh, dry, or boiled thyme to poultry at least once a month as a preventive measure or to treat bacterial, viral, or respiratory disease symptoms. As a lotion, it can be used to clean wounds and injuries. To prepare, bring a large handful of fresh thyme to a boil in 250 ml of water. Let it cool before mixing with feed at the rate of 30 ml (2 tablespoons) per hen per day for 4 to 5 days.

Garlic (*Allium sativum*) and onion (*Allium cepa*)

Use this recipe for viral infections. Gather 1 kg of onions and 3 to 4 heads of garlic. Cut the onions and garlic without peeling them. Put them in a container (that you have a lid for), add 5 L of water, and let the contents macerate (soften) with the lid on until there is no more fizzing. To speed up the fermentation process, add a little sugar. This fermentation process lasts about 15 days, and then we collect the solution (removing solids) and add 30 to 45 ml (2 to 3 tablespoons) of this preparation per liter of water for the poultry.

Figure 4. Basil (top) and lemongrass (bottom) infusions. *Source:* Stacy Swartz

Garlic (*Allium sativum*), ginger (*Zingiber officinale*), and lemon (*Citrus limon*)

In 1 L of water, mix 1 clove of garlic and a small piece of crushed ginger plus the juice of half lemon to help fight respiratory diseases, particularly Newcastle disease.

Lemongrass (*Cymbopogon citratus*) or basil (*Ocimum basilicum*)

A hot infusion of a handful of lemongrass or basil leaves in 1 L of water, then cooled to lukewarm (Figure 4) and given to poultry to drink, helps to fight respiratory diseases.

Mint (*Mentha* spp.), ginger (*Zingiber officinale*), or baobab (*Adansonia digitata*)

Boil a handful of mint, ginger, or baobab leaves in 1 L of water for a short time, then cool to lukewarm and give to poultry to drink. This recipe aims to help fight respiratory diseases.

Five tree species combination

Faidherbia (*Acacia albida*), African mahogany (*Khaya senegalensis*), desert date (*Balanites aegyptiaca*), shea (*Vitellaria paradoxa*), and neem (*Azadirachta indica*) are plants individually recognized as preventive and curative remedies for several poultry diseases, but when combined, they are even more effective because they have a broader spectrum of action.

Take 1 kg of bark from each of the five species and put them in a pot with a capacity of at least 25 L. Add 15 L of water and mark the water level on the pot. Then add another 5 L of water and bring the mixture to a boil. When the water boils and reduces (via evaporation) to reach the marked level, remove the pot and let it cool. The solution can be stored in a container and used for up to 3 months. For prevention, mix 1 L of the solution with 5 L of water and give it to the poultry for 3 consecutive days, then repeat the procedure once a month for 3 consecutive months. For curative use, mix 1 L of the solution with 5 L of water and give it to the poultry for 3 consecutive days, then repeat the procedure once a week for 3 consecutive weeks.

Conclusion

Successful local chicken farming in West Africa depends on a combination of traditional know-how and modern practices adapted to the local context. Adopting simple yet effective techniques such as improved feeding, vaccination, health monitoring, and record-keeping can increase productivity and income.

Local chickens, well-adapted to climatic conditions and available resources, represent a valuable opportunity to strengthen food security, improve livelihoods, and empower rural families. By investing in rigorous management and promoting good practices, each farmer can transform this activity into a sustainable source of benefits.

For more details about traditional extensive and improved semi-intensive chicken production systems in West Africa, see *ECHO Technical Note* 104: Local Poultry Farming in West Africa.

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Echoes from Our Network: Case for Action in Indigenous Local Knowledge Preservation

by Joel Fletcher
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Introduction

Contexts rapidly change in communities in which agri-development workers operate globally. Complex community dynamics including globalization, established local skill sets, diverse agricultural know-how, Internet access, and increased government scrutiny are creating interesting challenges for the cross cultural agri-development worker. Documenting and preserving Indigenous Local Knowledge (ILK) is an important area of work for the agricultural community. Such knowledge helps preserve biodiversity, which is being lost at astonishing rates in places that are most vulnerable. Communities in tropical ecosystems are disproportionately affected by marine life death, sea level rise, diversity loss, and changing rainfall patterns. These communities rely on natural capital and ecosystem cycles – when these patterns are disrupted, families experience stress in their growing conditions and harvestable foods. Biologists estimate annual loss of species at 1,000 times or more greater than historic rates, and linguists predict that 50% to 90% of the world's languages will disappear by the end of this century (Gorenflo *et al.*, 2012). This article explores possibilities for ILK interaction with cultural communities and biodiversity hotspots, potential benefits of this effort, and ultimately calls to action workers who have proximity and trust networks.

Preserving ILK is vital to communities and their sovereign cultural status. Agricultural knowledge present in indigenous languages –about medicinal uses, landraces of significant crops, ecological maintenance, and much more – are of utmost importance to preserve. This knowledge, often in the form of stories, is conjoined with physical germplasm as elements that acknowledge the dignity of a particular community. Communities have unique foods/practices, but also

maintain diverse, resilient genes for ecosystem function and potential future agricultural breeding. Access to diverse genes for future breeding ensures the maintenance of the global food supply. Read about adaptive breeding by Swartz *et al.* (2026) as an example.

There are many ways to view the variables impacting community flourishing; one angle that must be considered is the implicit ILK present in minority language communities. We propose that ILK preservation is foundational to communities thriving in their identity amongst their ecological landscape and to more robust, holistic scientific knowledge.[2] Investigation has shown "that indigenous economies and management practices essentially enable high biological diversity to persist (Gorenflo *et al.*, 2012)." For example, indigenous lands occupying one-fifth of the Brazilian Amazon, five times the area under park protection, are the current most important barrier to Amazon deforestation (Gorenflo *et al.*, 2012). Below are two maps, Figure 5A noting locations with high rates of biodiversity, and Figure 5B noting high rates of linguistic diversity. Linguistic diversity and biodiversity correlate due to many variables, but perhaps the most significant is the fragmentation of geography and ecology. In difficult-to-traverse locations, diversity results as populations become unique in specific microclimates.

[2] Practical implications of the importance of ILK were discussed by Robert Walle in Issue 171 of *ECHO Development Notes* (http://edn.link/cg7gxf) in his review of a book on The Plug-In Principle (Dittoh *et al.*, 2025).

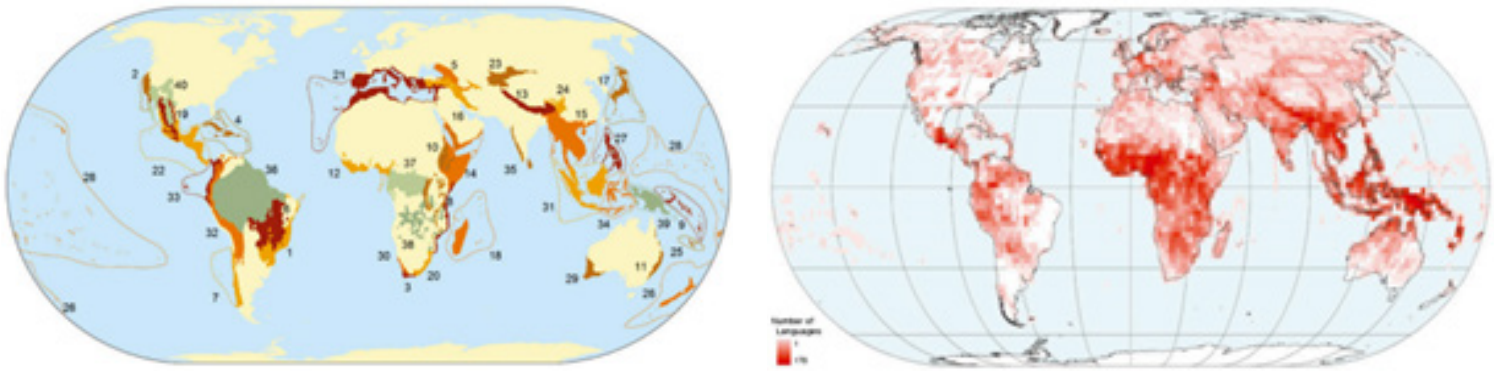

Figure 5. Areas with high biodiversity (left) and geographic distribution of indigenous and nonmigrant languages in 2009 (right). *Source:* Gorenflo et al. 2012. Co-occurrence of linguistic and biological diversity in biodiversity hotspots and high biodiversity wilderness areas. PNAS 109(21):8032-8037 https://doi.org/10.1073/pnas.1117511109.

Holistic development programs include ILK preservation as a component of just, dignified programs. Minority language communities steward the ecological landscape around them – culture and language are intrinsically connected to the ecosystem. A UNESCO report states, "Indigenous Peoples own, occupy, or use a quarter of the world's surface area, and it is estimated that at least 1.65 billion Indigenous Peoples and members of local communities live in important biodiversity conservation areas, home to 80% of the world's remaining biodiversity" (2022, Cutting Edge | Indigenous Languages: Gateways to the World's Cultural Diversity). When languages cease being spoken, the embedded knowledge also ceases. This affects the micro-level, where use of plants and animals disappears, as well as the macro-level, where ecosystem management strategies disappear.

Below is a stepwise sequence of events leading to the loss, and resulting ramifications, of plant-based medicine.

The forgotten medicine sequence:

0. PLANT is used, cultivated, and domesticated where possible, and has noted growth habits in wild areas.
1. PLANT is spoken about.
2. PLANT is only known to elders as changes occur in ecosystem, access, and wider globalization.
3. PLANT is only known in stories, if any exist.
4. Stories are forgotten; PLANT is forgotten.
5. No notice when PLANT disappears/goes extinct.
6. Ecosystem is unbalanced, further disruptive effects.
***PLANT could be replaced with "environmental/agricultural practice" to the same or similar consequence.**[3]

[3] A significant pest is the sugarcane white grub (*Lepidiota stigma*) in Bali. Traditionally grubs were a food source, but younger generations are less interested. Without human pressure, the grub population exploded, impacting sugarcane yields (Samosir, 2020).

If a plant's significance is forgotten, there is no notice of when it disappears or becomes extinct. Yet, there are catastrophic cascading effects that occur. To quote extensively from Fernández-Llamazares *et al.* (2023), authors' emphasis:

> Several studies have documented the potential effects of ethnobotanical knowledge loss on Tsimane' health and nutritional status, for example, by precipitating a rapid dietary transition. A seminal study by McDade found that *mothers with lower levels of ethnobotanical knowledge were more likely to have less healthy children* (e.g., stunted growth, inflammation) than plant-savvy mothers, highlighting the crucial role of women as knowledge gatekeepers. Furthermore, Tsimane' villages with greater *levels of ethnobotanical knowledge tend to be surrounded by healthier forest ecosystems than those where knowledge has been substantially eroded*. Landscape fragmentation and deforestation exert impacts on both Tsimane' health and nutrition, as they reduce access to a diverse pool of wild foods and medicinal plants.

Physical germplasm is connected to ILK. Culturally significant vegetables for minority language communities are only procured through trusted connections. Certain eggplant varieties, significant in cultural cuisine due to shelf life and desirable cooking qualities, are only available through seeds saved by local gardeners in the Philippines. Upland rice varieties are going extinct as farmers are mandated by markets to grow more commercially acceptable types. In contrast to the farmer's forced choices, special upland rice landraces are especially fragrant, tasty, and highly desirable - but only at certain times of year. Such varieties are being lost due to market pressure.

Luhyia and Marakwet communities in East Africa steward tree, which are critical to sustaining their culture. An excerpt from Clark's paper (2023) on Indigenous Knowledge transfer methods is pertinent:

> The major underlying problem was seen as the lack of strong indigenous trees which enable water retention, keep the soil healthy and reduce erosion. Many people, for economic reasons and encouraged by the government, have been planting trees of the wrong sort, like blue gum (eucalyptus) which damage the soil. Community elders know the types of indigenous trees and the best places for them. Fruit trees provide food, good foliage for manure, shelter on the farm, shelter from the sun at home, and eventually firewood. Some women's groups have started nurseries to provide seedlings of traditionally treasured varieties and generate income. … Other traditions maintained justice within the community. Young people could not harvest certain trees for firewood, so that some was left for old people. When old trees fell, only old widows could collect firewood from them. Anyone else would be struck by lightning or illness.

Care for the environment and fellow community members guide these stories. These are indigenous ideas with indigenous rationale, and are also known to be powerful agroforestry concepts for integrating best practice agriculture models.

Case for Action

There are three avenues for catalytic action:

1. **Local market capacity building** to increase the viability/durability of significant crop, vegetable varieties, and older genetic strains of plants and animals. *Purchase less common rice strains, millet varieties, and less common vegetables through local smallholders, even if it requires more energy/time/cost. A good guiding question for a local elder is "what was a food when you were a child that you don't see people eating/preparing anymore?"*
2. **ILK preservation, documentation, and seed banking.** Story forms [4] are likely the most important avenue, but databases of seed history, use, and description are also imperative. Seed bank offerings should be labeled in both trade languages and various minority/local languages. Communities need to retain sovereignty of their ILK, and limit exploitation. Capturing elder knowledge allows community members to rediscover their identity. *Participate in planting and harvest ceremonies, being curious about changes between former and current practices. When elders share stories about the birds that used to migrate through their valley, seek consent to record [audio only] as a respectful first step to documentation.*
3. **Cultural dignity and elevation:** cooking, dance and costume, bodyart, weaving, ceremonial practices, etc. are rooted in environmental products. Food, fiber, dye, and even seasonal rhythms like rain and water access, are predicated by environmental interaction, harvest, and care. Providing dignity to often marginalized communities and their cultural form has an implicit action to safeguard, steward, or rehabilitate their ecosystem.

[4] Traditional African vegetables, many of them being underutilized, play a significant role in hunger prevention, particularly after they are documented. See "Food from the Wild" by Erwin Kinsey (2023).

Treat ILK as intellectual property, with all the rights associated, of a community.

For communities to thrive, they need access to resources, capital, and networks. Working to preserve ILK provides avenues for traditional stewardship of resources and retains capital. The window of access to elder knowledge is quickly closing. An agri-development program is incomplete without ILK engagement responsibilities, and perhaps is the most significant role of a team. Voicing honor and dignity for traditional wisdom builds physical capacity and leads to flourishing.

Further Resources

Signposts to Identity-Based Community Development by Smith and Wisbey (2013) PDF document that explores community development through the lens of ILK [http://edn.link/ibcd].

"Can saving languages save nature?"A video accessible online (http://edn.link/langnat) that explores the link between language loss and loss of biodiversity.

Preserving, Strengthening and Promoting Indigenous Peoples' Food and Knowledge Systems and Traditional Practices for Sustainable Food Systems: Draft of an online (http://edn.link/faopreservingilk) paper that expands on concepts covered in this article. Note Table 4.3 on page 42, which connects ILK concepts with relevance to food security.

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Books, Websites, and Other Resources: The Light Wheel Toolkit: Bringing Holistic Community Development to Life

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Flourishing. Impact. Holistic transformation. What do those words mean to you? We often use words like these to describe the bigger changes we hope to see in the lives of individuals and communities. But do we really understand what we mean by these aspirational terms? What changes are we looking for? How do we measure whether whole-life impact is actually taking place?

In March 2026, SIL's LEAD Global, ECHO, and Tearfund, facilitated a Community of Practice called 'Flourishing Communities – Planning for Holistic Change' [http://edn.link/silcop2026]. The event created a space to grapple with these big questions, to consider what a holistic life really looks like, and to explore practical tools for holistic impact measurement.

One of these tools is Tearfund's Light Wheel, a holistic wellbeing framework for thinking about, planning for, and measuring human flourishing. Tearfund[2] wants to see people and communities transformed in an enduring and holistic way. The Light Wheel defines nine different aspects of wellbeing that need to be addressed in order for individuals and communities to fully flourish. This article introduces the Light Wheel and guides you to resources for how you might apply this tool in your own work.

Our shared understanding of holistic mission

ECHO and Tearfund share a vision where churches, communities, partner organizations, and network members are thinking in an integrated and holistic way and living out their faith in all areas of their lives.

At Tearfund and ECHO, integral mission shapes our commitment to mobilizing and equipping churches and organisations to bring about whole-life transformation in a broken world. We share the theology that full transformation comes through the restoration of four broken relationships: our relationship with 1) God, 2) ourselves, 3) others, and 4) the natural world.

The Light Wheel's nine aspects of wellbeing (Figure 6) can be linked to one or more of the four broken relationships, to give practical examples of the areas of life we must consider if we want to see relationships restored and lives fully transformed. The shape of the wheel represents the interconnectedness of all areas of our lives, and reminds us that change in one area can affect other areas. The wheel includes aspects of life (nine spokes) that have been challenging to measure, but we know these dimensions play a very important role in people's sense of wellbeing.

Who is the Light Wheel toolkit for?

If you work with communities or churches and you want to help them work towards holistic transformation, then the Light Wheel is worth exploring. It is a very flexible tool that you can use in many ways. It is a conceptual framework to help people reflect on their experiences and take the lead in assessing their situations. The Light Wheel also has a toolkit of Monitoring, Evaluation, Accountability, and Learning (MEAL) resources that help people to plan, measure, and gather evidence from a holistic perspective (Figure 7).

1. LEAD Global is part of SIL Global, a faith-based INGO, see: https://www.leadimpact.org/.

2. Tearfund is an international, Christian NGO, working on development, humanitarian and advocacy work in 50 countries worldwide, see: https://www.tearfund.org/.

Figure 6. The 9 aspects, or spokes, of the Light Wheel. *Source:* Tearfund

Figure 7. Participants of a Light Wheel discussion in Bangladesh scoring the maturity model. *Source:* Amit Rudro/Tearfund

Local communities and churches find the experience of using the Light Wheel approach to be transformative, because they become co-creators in monitoring and evaluating their own situations. Light Wheel activities show participants that their voices are important and the tool becomes a familiar framework for people to regularly measure and celebrate changes taking place in their lives and to dream for the future. Using the Light Wheel also strengthens relationships with the communities during the process, and highlights areas for future growth.

Case study – training on the Light Wheel in Thailand

> "Learning about MEAL tools for community and church engagement through the Light Wheel has deepened my [Pat] understanding of holistic transformation. It highlights how different aspects of life are interconnected and cannot be viewed in isolation."

Its indicators can be adapted to fit the specific context of an organization and the communities it serves. Importantly, it enables participants to actively engage in the process by sharing their perspectives and contributing to the scoring or assessment levels. This makes the tool interactive, engaging, creative, and highly practical, while also helping visualize change in a clear and meaningful way (Figure 8).

Figure 8. Attending Light Wheel training in Chiang Rai, Thailand. *Source:* ECHO Asia

> What stood out to me [Pat] most is its versatility. The Light Wheel can be applied not only in program evaluation, but also for personal life reflection across different dimensions, integrated into Bible study contexts, and introduced within our organization to support staff development. I look forward to exploring this tool further and applying it to foster holistic growth and learning.

How has the Light Wheel been developed?

Tearfund has been developing the Light Wheel since 2013, based on the lived experiences of Tearfund's staff and partners globally, as well as academic research into wellbeing and Tearfund's theology as a Christian organisation. For over 10 years, Tearfund has tested the tools and gathered learning from users globally. These experiences informed the second edition of the Light Wheel toolkit, which was published in 2024. The resources are now also available in Spanish and French, with more languages to follow [http://learn.tearfund.org/lightwheel].

Introduction to the nine aspects of wellbeing

Before you decide how to apply the Light Wheel in your work, it is important to have a good understanding of each of the aspects of life represented by nine spokes. As you read through them, think about how they are expressed in your context.

1. Living faith

Our faith in God and the way our daily lives are shaped by it.

This spoke explores our commitment to practicing faith regularly and the ways we rely on it in times of difficulty. It also looks at whether we engage in acts of service that are prompted by faith, and whether we collaborate with people from other faith groups.

2. Personal relationships

The love, security, and respect we find in marriages, families, and close friendships.

This spoke considers whether we trust and are trusted by the people whom we are close to. It considers the benefits that healthy personal relationships bring to our wellbeing, and how we make decisions and resolve disagreements with the people we live with.

3. Emotional and mental wellbeing

How we feel about ourselves and the opportunities we see in our future.

This spoke considers whether our daily lives include activities that excite and interest us, and whether our future gives us hope. It also explores the ways we cope with responsibilities and difficult situations, and how well supported we are emotionally.

4. Social connections

The extent to which we connect with and support each other as a community.

This spoke considers the benefits of being part of community groups and shared projects and looks at how inclusive we are of people who are different from us. It also looks at how safe and secure we feel in our communities.

5. Participation and influence

Using our voice to influence decision-makers and make our communities a better place.

This spoke looks at whether we feel able to share our views in public spheres and whether we believe that we can create or influence positive change. It also considers whether we know what practical steps to take to engage decision-makers.

6. Physical health

Looking after our bodies and having access to good-quality health services.

This spoke looks at how healthy the people in our community are. It also considers whether we can access or know about ways to stay healthy, such as drinking safe water, practicing good hygiene, and having a varied diet.

7. Material assets and resources

Using our creativity to make the most of our resources, make new resources, and share our resources with others.

This spoke considers the resources we own and the ways we earn a living and save money. It looks at the ability this gives us to pay for essential household needs and even share our resources with others. It also explores the resilience of our assets and whether we can access formal and informal financial services (e.g., lines of credit).

8. Care of the environment

Looking after and enjoying the natural world, easing the risks, and protecting resources for future generations.

This spoke is about our relationship with creation. It looks at whether we understand the risks posed by climate change, environment-related disasters, and pollution, and take action to reduce them. It considers whether we have access to nature – not only for the resources we need, but also for our enjoyment – and whether the same will be true for future generations.

9. Capabilities

Developing and using our gifts and skills to make a living, serve others, and bring about positive change in our lives.

This spoke considers whether we have the ambition and vision to know what we hope to achieve in our lives. In turn, it explores whether we have or can develop the skills required to achieve our vision and share our skills with others.

Figure 9. Scoring the Light Wheel maturity model in Nigeria. *Source*: Nanmet Anthony/Tearfund

An overview of the Light Wheel tools

The Light Wheel tools are based on the nine aspects of wellbeing and help us to gather data to build up a holistic picture of an individual's or a community's life: what's going well and where there are challenges. When we use the tools for the first time, they give us a snapshot of the situation at a point in time. Because not everyone should be all things to all people, these tools help focus our attention as we choose which steps to take towards holistic transformation and where to potentially bring in partners for collaboration. When we use the tools on a regular basis, we track holistic change over time and assess whether our actions are having a positive impact (Figure 9).

You can choose which Light Wheel tools you use, and how many of them, depending on how light-touch or in-depth you want your methodology to be. You could use just one tool or several tools together. The tools draw on different sources of information (Figure 10). When we bring together these different perspectives, we build a rich picture of the situation and have more confidence in our findings.

- **The Light Wheel survey** focuses on people's personal perspectives.
- **Group discussions** are a chance for people to discuss and debate their experiences and perspectives collectively (Figure 11).
- **Observation tools** provide additional insight to deepen our understanding of how things are.
- **Context tools** reveal external dynamics that are influencing the situation.

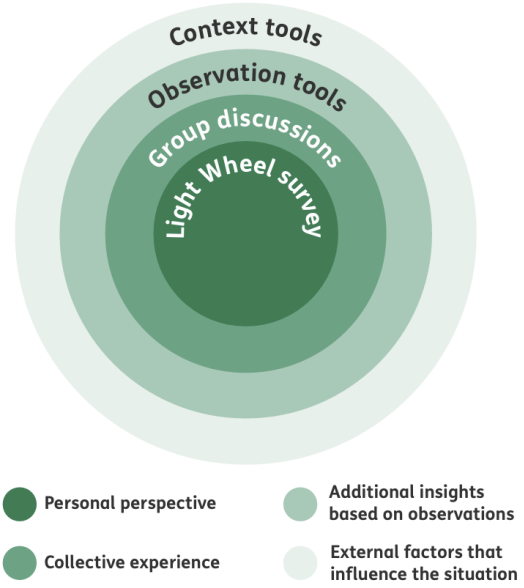

Figure 10. Sources of information diagramed in a relative way. *Source*: Tearfund

Further resources

If you would like more information about how to apply the Light Wheel in your work, Tearfund has developed lots of freely available resources for you to explore:

The Introduction to the Light Wheel e-learning course is a good place to start. It is a self-led, online course including case studies and interactive exercises to learn more about the nine aspects of wellbeing. See: learn.tearfund.org/LW-elearning

The Light Wheel Bible studies will help you unpack the theology behind each of the nine aspects of wellbeing and explore what the Bible teaches us about each area. See: learn.tearfund.org/LW3-1

Figure 11. Participants of a Light Wheel group discussion in Bangladesh. *Source:* Amit Rudro/Tearfund

The full Light Wheel toolkit contains all the theory, practical instructions, and downloadable resources you will need for applying the Light Wheel in your work and training others. It's currently available in English, Spanish, and French. See: learn.tearfund.org/lightwheel-toolkit

If you still have more questions, you can email lightwheel.support@tearfund.org. If you are interested in trying this framework in your context, we'd love to hear from you. Contact Gerrianne Pennings Snoxell at globalmealstaff@echonet.org.

See the full calendar on ECHOcommunity.org/events

Upcoming Events

Sustainable Agriculture and Appropriate Technology Symposium

June 23-25
ECHO East Africa | Ethiopia

Community Seed Bank Forum

October 5-9
Chiang Mai | Thailand

Tropical Agriculture and Development Course

November 2-7
Chiang Mai | Thailand

International Agriculture Conference

November 10-12
Fort Myers | Florida