

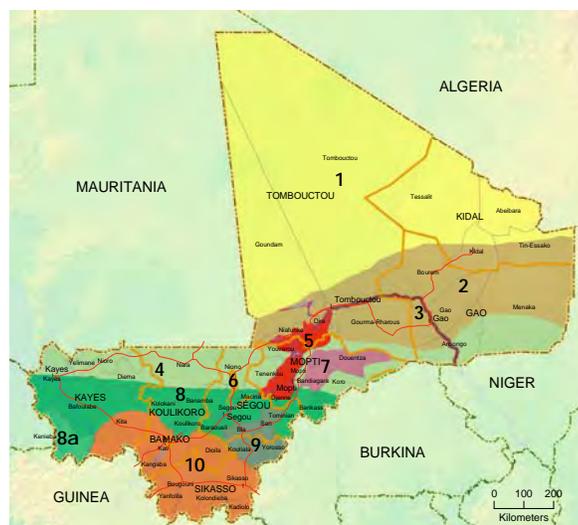
Mali Livelihood Zones

Zone 1- Southern maize/cotton/fruit		
Food Crops	Sorghum Maize Shea nuts Nere pods	This zone has annual rainfall between 1200-1400mm. The rainy season lasts between 150-180 days. Staple food in the South is maize, and the moderate surplus is marketed to Bamako, Mopti, and Kayes. Millet and Sorghum are the staple foods in the North. Shea nuts (for butter) and nere pods (for seeds and gelatinous powder), collected from trees, are an important food source as well. This is the heart of cotton cultivation which is organized by the National company. Fruit is marketed to Bamako. The good rains provide an important seasonal grazing area for livestock from further north and drought has forced some cattle to permanently migrate to this region. There is some seasonal transhumance of local cattle into Ivory Coast, Burkina Faso, and Ghana. Ivory coast provides work for people from this zone. Major hazards include poor distribution of rainfall over the season, cereal pests (especially stem borer), high cost cotton inputs (fertilizer, insecticide), and the closure of frontiers for migration mainly to Ivory Coast.
Income	Cotton Maize Fruit	
Livestock	Cattle	

Zone 2: South-east millet/sorghum/cotton		
Food Crops	Sorghum Millet	Rainfall is between 800 and 1100mm, over a 125-150-days rainy season. This zone produces up to 20% of national sorghum and millet, and is strategically located for marketing north to Mopti, west to Segou Bamako, and east into Burkina Faso. This is the corridor for seasonal herd migration from Mopti through to southern humid zone. Livestock husbandry is cattle and small stock, and poultry (and eggs) which is marketed beyond the zone. Major hazards are rain shortages, and/or breaks in precipitation at critical times in the growing cycle, crop pests (grasshoppers, Spanish fly), and floods.
Income	Cattle Small stock Poultry Eggs	
Livestock	Cattle Small stock Poultry	

Zone 3 – West and Central rain fed millet/sorghum		
Food Crops	Millet Sorghum Maize Groundnuts	Rainfall is around 700mm per year over a 100-150-days rainy season. It has the highest population in the country, and dominates the north-south commercial axis of grain trade towards the deficit north, the livestock trade and seasonal migration toward the south. Major stretches of both the Niger and Senegal river are in this zone. Millet is the major crop, with more sorghum towards the south. Maize, groundnuts, melons, and sesame are produced in small quantities, while bambara groundnuts and cow peas important cash crops. Small scale vegetable gardening is profitable especially if located close to towns. Cross breeding of cattle is common. Poultry (chicken and guinea fowl) are important cash earners marketed to towns and neighboring countries. Major collected fruits and products include shea nuts, nere pods, baobab fruit, jujube fruit and tamarind. Hazards are the same as those in Zone 2.
Income	Bambara groundnuts Cowpeas Vegetable gardening	
Livestock		

Zone 3a - Western sub zone: fruit, millet, and sorghum		
Food Crops		This zone has the same production features as with Zone 3, but has higher rainfall of 1000mm per year. It is a niche area for fruit production which is marketed both within Mali and in neighboring countries. Major livestock is small livestock.
Income	Mango Banana Citrus	
Livestock	Small livestock	



Zone 4: North Sahel band: millet/transhumant herding		
Food Crops	Millet	Rainfall is around 500mm per annum with acute inter annual variation. The rainy season lasts between 75 and 100 days. The zone is a permanent importer of staple grain from the central and southern zones, despite an occasional successful millet production. Cattle and small stock are the most valuable products. The west of the zone is a host to seasonally migrating herds from Mauritania, particularly in bad years. Main hazards facing the area are rain failure, extended gaps between showers, crop pests especially grasshoppers, and livestock disease. Catastrophic sequential droughts occur once or twice per generation.
Income		
Livestock	Cattle Small stock	

Zone 5 - Dogon plateau: millet/onions		
Food Crops	Millet, Sorghum	Annual rainfall is between 500 and 600mm, over a 100 day rainy season. The ecology is rocky and hilly. There is extensive millet cultivation, intensive vegetable cultivation, especially onions which are traded to Bamako and beyond. Profits are generally invested in cattle, and larger herds are contracted out to Fulani herders for far grazing. Small stock is kept and grazed locally. Major hazards are rainfall shortages which particularly damage vegetables and cereals. Vegetable pests are also problematic.
Income	Onions	
Livestock	Cattle Small stock	

Zone 6: Office du Niger- Irrigated rice		
Food Crops	Rice	This is an irrigation command area mainly producing paddy rice. Land use and water provision is regulated by the Office.
Income		
Livestock		

Zone 7: Niger delta/lakes : rice and flood-retreat sorghum		
Food Crops	Rice	This is essentially the internal delta of the Niger river, a flood plain under water for some five months of the year from end-rainy to mid-dry season. The flood produces a major resource in nutritious grazing, such that the zone is a magnet for cattle herds from far around. Local villagers cultivate paddy and floating rice, and seed sorghum progressively as the waters withdraw, gaining early harvests as the time of the year when national prices are relatively high. Nomadic fishermen are based in this zone, traveling up and down river. Mopti is a major collecting market for dried fish. Hazards are rain failure and low flood levels which are affected by the rains nearer the source of the Niger far to the south west in the Guinea massif, and the operation of the major dam at Selingue, Yanfolila cercle on the Guinea border. Fish catches are reduced by low river/flood levels, which affect the natural spawning areas. There is limited tourism to the nature conservation area – the first cross desert watering and feeding ground for birds seasonally migrating from Europe.
Income	Fish, Tourism	
Livestock		

Zone 8- Riverine- bend of the Niger		
Food Crops	Rice Sorghum Millet	Rainfall is between 100 and 300mm per year, and depending on latitude, the rainy season lasts 75-100 days. It has a north sahelian to semi desert ecology. This zone contains the riverside settled populations along the great bend of the Niger which runs from the northern tip of the Niger delta through the semi arid ecologies of the Tomboctou and Gao to the frontier with Niger in Ansongo cercle. There are irrigated rice paddies, limited rain fed millet cultivation and flood retreat cultivation of sorghum on river banks. Due to the isolation of the area from main roads and commercial centers, irrigated vegetable cultivation concentrates on onions which can be sufficiently preserved, and tomatoes which can be dried. There is also a trade in dried fish. Sedentary populations engage in transhumant cattle herding as well as small stock around the village, forming an important part of the better off to middle household livelihoods. There is high work out migration by young men. Main hazards are low river levels, erratic rainfall, grasshoppers and crop pests.
Income	Tomatoes Onions Dried fish	
Livestock	Small stock Cattle	

Zone 9- Northern nomadic and transhumant pastoralism		
Food Crops		This zone has a 75 day rainy season with rainfall under 200mm per year. This is insufficient moisture for crop cultivation. It has north sahelian ecology, with sparse grass toward the edge of the desert. Pastoralism is the only viable livelihood, both transhumant and nomadic modes. Camels are seasonally taken north into the desert zone, if there is good grazing pasture, and cattle are seasonally taken south in Mali and sometimes into Burkina Faso. There is a trade in livestock for grain at market centers along the Niger river and further south, and a trade in dairy products when moving in proximity to settled populations. Wild <i>fonio</i> grass-like seeds are collected for human consumption. Main hazards are low and erratic rainfall, which diminishes water points and pasture, forcing early southward migration. Crowding in southern pastures beyond the zone in bad years forces animal sales and engenders conflict with settled populations over water and crop damage.
Income		
Livestock		

Zone 10- Desert		
Food Crops		If it rains, rainfall is between 0 and 200mm per year over 75 days. Rain falls in isolated showers with surface moisture drying up before grasses can establish themselves. This is a minimally populated zone. It is a salt curing area. There is also a camel caravan trade plus motorized trade into Algeria.
Income		
Livestock		