



## USAID COUNTRY PROFILE

### LAND TENURE AND PROPERTY RIGHTS

## INDIA

### OVERVIEW

With a population of 1.35 billion, India is the world's largest democracy. Continued accelerated economic growth, averaging 7 percent per year in the last decade, has brought significant economic and social benefits. Measured in terms of purchasing power parity, India has become the world's third-largest economy. (World Bank 2018a; World Bank 2018c)

Against this backdrop of progress and structural change, poverty and disparities in income and human development remain major challenges. The country has made great strides in reducing extreme poverty (from 45 percent in 1994 to 22 percent in 2012). However, 70 million people still live in extreme poverty (living on less than \$1.90/day), and 38 percent of Indian children show signs of suffering from chronic undernutrition. Stark disparities in economic growth and poverty exist between regions and across social groups. People living in poverty, minorities, women, Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Classes (government classifications based on social and economic status) all have inadequate access to the resources and opportunities that would permit them to benefit from the country's booming economic growth.

**India's development challenge is to make the country's continuing growth substantially more inclusive. Among the constraints to achieving widespread participation in the growth process are tenure insecurity and inadequate enforcement of property rights (UNICEF 2018).**

Women's land rights in India are not as secure as those enjoyed by men. Discriminatory social norms and practices remain a concern in many areas, and only about 10 percent of privately held land is in the name of women. The customary land rights of tribal people have been undermined by laws and other reforms, leading to a steady loss of their land. Conflicts over forests, agricultural lands, and natural resources are pervasive, and in several central and northeastern states, such conflicts have contributed to the rise of a Maoist insurgency. Mining continues to encroach into forest areas and leads to serious conflicts with local communities in some areas of the country.

Pressures on the natural resource base are increasing. Continuously falling per capita water availability, overexploitation of groundwater, and declining water quality are becoming increasingly acute problems. Demands for wood, livestock grazing, and agricultural land are exerting pressure on forests. These challenges are aggravated by tenure insecurity and lack of clarity in use-rights, both of which discourage resource conservation and investments to safeguard the productivity of the natural resource base.

## KEY ISSUES AND INTERVENTION CONSTRAINTS

USAID and other donors can assist India in strengthening land tenure security and property rights governance in several strategic ways.

**Strengthen access to information on land rights.** In India, most poor people are not aware of their legal rights to land and property and have limited or no ability to access land administration officials or courts to assert and defend land claims. *USAID and other donors could support legal literacy programs focusing on land rights especially for poor rural women and ST communities.* Such programs could be modeled on the successful women's land literacy program implemented by the West Bengal State Rural Livelihoods Mission.

**Support measures to strengthen women's land rights.** Women have difficulty obtaining access to land, including through inheritance, and difficulty retaining rights to land. Under most past land reform efforts, women have not benefited on par with men. USAID intends to focus on the needs of poor women and girls and recognizes that women's rights to land are significantly compromised in India. *USAID and other donors could support the Government of India (GOI) in implementing a gender strategy focused on changing social norms to encourage social recognition and social acceptance of women's inheritance rights as well as programs to support women who assert their inheritance rights.* National law supports these rights, but social norms and state land administration processes and administrators discourage women from asserting such claims. Care should be taken to ensure that women claiming such rights are not socially endangered. Lessons could be collected and disseminated from NGOs working to support women land rights claimants, including those working to shift social norms, such as the Working Group for Women and Land Ownership in Gujarat.

**Work with states to ensure greater community participation in ongoing campaigns to update rural land records.** Programs to digitize and update land records are ongoing in many Indian states. *USAID and other donors could study how these programs affect local communities and how local participation could be encouraged to ensure that records match on-the-ground realities, promote involvement by local communities, and create local employment opportunities.* Supporting the involvement of women in land records maintenance deserves special consideration.

**Expand alternative dispute resolution.** Land-related disputes continue to dominate the Indian court system, creating backlogs that prevent just and timely resolution. *USAID and other donors could support a project to create and expand alternative dispute-resolution programs to help alleviate the backlog in land-related cases.* To this end, USAID could build on its past projects that have improved the justice system administration by supporting stronger community-level legal systems, training justice sector personnel, improving court management, and promoting alternative-dispute resolution including mediation. (USAID 2002; USAID 2010b; Biswas 2018)

**Support measures to liberalize agricultural tenancy.** For many decades, tenancy has been banned or heavily regulated in most Indian states. However, illegal tenancy is widespread, and recent research indicates that opening tenancy markets could increase access to land for the landless and land-poor. The GOI has announced a goal of facilitating the liberalization of the tenancy markets. *USAID and other donors could support comprehensive research on the impact of agricultural tenancy laws, with special emphasis on understanding how such laws affect women's land tenure and livelihoods.* The research should investigate the experience of tenants and landowners in states where tenancy has recently been liberalized and provide specific recommendations for legislative changes in high-priority states.

**Monitor the spread of contract farming.** The GOI has turned to contract farming to increase agricultural productivity, secure extension assistance, and ensure crop purchases. In some states with advanced agriculture, such as Punjab, contract farming appears to be going relatively smoothly. *As states promote contract farming in new regions, USAID and other donors could encourage states to find ways to involve female farmers, small-scale farmers, and tenant farmers, including through local NGO support with farmer education and contract negotiations.*

**Improve knowledge of ST land holdings and the reasons for land alienation.** A considerable amount of research highlights the ongoing loss of land by ST members. Further research on the causes would be indispensable in devising workable interventions. For example, how much land alienation is due to displacement for infrastructure, dams, and mining? When ST members sell land, is it done voluntary (though illegally) or under pressure? Who is buying the land? *USAID and other donors could support a project to collect India-wide data on ST landholding and reasons for land alienations. They could also support research into the application of laws that restrict alienation of ST land to determine whether these laws should be amended to respond to local circumstances.* Based on the findings, officials could take appropriate actions at the state and local levels to enhance restrictions, shore up enforcement programs, provide for legal services and judicial education, and consider methods to support the diversification of ST livelihoods.

**Support improved implementation of forestry legislation and policy.** The Forest Rights Act of 2006 supports increased local ST communities' involvement in forest management; however, most states have not yet effectively implemented the law to this end. Further, there is a lack of surveyors available to demarcate land that can be titled to forest dwelling households. *USAID and other donors could support research on the impediments to implementation of the Forest Rights Act, with a focus on the needs and roles of ST forest communities and means of encouraging sustainable participatory forest management. They could also support increased surveying capacity.*

**Partner with the GOI to more efficiently manage water resources.** India's water resources are overused and polluted, leading to water scarcity and poor water quality. The GOI recognizes this and is taking steps to address these issues. *USAID and other donors could work with GOI and states to further develop sustainable water resources management policies that better regulate the use of groundwater for irrigation and encourages local management of water resources.*

**Encourage research on best practices for soil restoration.** In India, nearly half of all land is degraded due to current agricultural practices, industrialization, and other factors. *USAID and other donors could work with the government at the national and state levels to further understand the causes of soil degradation and identify possible remedial and preventative measures.* Specifically, donors could support research on best practices for soil restoration and conservation to identify appropriate solutions, such as conservation agricultural techniques, reclaiming brown fields, and preventing runoff from manufacturing.

## SUMMARY

Land is the most important household asset and determinant of wealth to nearly all the Indians who live in rural areas (66 percent of the population). At both the national and state levels, the GOI has made significant efforts to reduce rural poverty by increasing land tenure security and making access to land more equitable. Previous land reform efforts in India have had some positive benefits, but much remains to be done.

India's urban population is the second largest in the world. Across the country, millions live in slums (i.e., poorly serviced settlements lacking in tenure security) on the urban periphery. As urbanization increases, urban living standards are likely to fall as local governments struggle to meet demand for services. Residents of some slum settlements continue to be subject to mass forced evictions, particularly in areas slated for commercial development.

Women's land rights in India are not as secure as those enjoyed by men, and discriminatory social norms and practices are widespread. Nationwide, roughly 10 percent of privately held land is in the name of women. Even when land is titled in a woman's name, her actual control over the land is limited. Furthermore, many rural women depend on agriculture for their livelihoods, yet their access to and control of land is extremely limited.

Laws governing forestland, as well as other reforms, have often undermined the customary land rights of tribal people. While legislative steps have been taken to secure their rights, implementation is inadequate. Tribes that the GOI officially recognizes are called Scheduled Tribes and commonly referred to as ST communities. Land reform policies that extended some rights to ST communities have not prevented a steady loss of ST land due to land development, conservation, and the illegal alienation of ST lands to non-tribal people. As a result, many families in tribal areas lack any rights to the land that they have occupied for generations.

Concerns about the inadequacies of the country's land record keeping system have been raised for decades. Various projects are underway to digitize records, but adjudication to permit records to be updated is a complex problem that most land record improvement projects in the country have yet to successfully tackle.

Disputes over land and natural resources are pervasive in India. The courts are clogged with unsettled land disputes. In the eastern and northeastern states, conflicts over forests and agricultural lands have their roots in long-standing inter-communal, ethnic, and separatist conflicts. In ST areas, disputes related to the illegal alienation of ST land to non-tribal people are common. In several central and northeastern states, large companies purchased land and mineral rights from state governments, which contributed to the growth of a well-armed Maoist insurgency known as the Naxalites through the mid-2000s. This insurgency, while still a security concern, is on the decline.

Water supply problems and water pollution in India are acute. Unregulated groundwater pumping drains public water reserves and depletes water tables. Per capita water availability in India has fallen since the country gained its independence in 1947 and will probably continue to decline. In addition, water quality is negatively affected by industrialization, agrichemicals, erosion, soil degradation, domestic pollution, and wetland degradation. The GOI recognizes these problems and is beginning to take steps to address the looming critical water shortages.

The demands of human development (wood, livestock grazing, and agricultural development) exert

severe pressure on India's forests. Development needs since Independence have created a large and growing demand for wood products. A shortage of productive irrigated agricultural lands in non-forest areas has led to mounting levels of forest encroachment by cultivators.

India has rich mineral resources and is a major producer of minerals. Mining and quarrying accounted for 2.7 percent of GDP in 2015. Coal mining accounts for 70 percent of employment in the mining sector. However, the mineral sector has given rise to conflict and environmental problems, and the agencies in charge of approving mining operations have been reprimanded for a failure of transparency by the Supreme Court.

## I. LAND

### LAND USE

India has a total land area of 2,973,190 square kilometers and a 2018 population of 1.35 billion people. Agricultural land comprises 60.4 percent of total land area, and approximately 37 percent of India's cropland is irrigated; arable land accounts for 52.6 percent of the country's total land area. Over 60 million hectares of land are considered wasteland, which is either completely barren or significantly under-producing. The GOI further classifies India's national land-use as follows: 43 percent sown; 21 percent forests; 8 percent fallow; 8 percent non-agricultural; 5 percent barren and uncultivable; 4 percent cultivable wasteland; 3 percent permanent pastures and other grazing land; and 1 percent miscellaneous tree crops and groves. Although officially classified grazing land comprises only 3 percent of the national land area, in fact over 50 percent of the land area – including forest land, fallow land, barren land and wasteland – is occasionally or seasonally used for grazing. (GOI 20016b; Hanstad and Nielsen 2007; Kushwaha 2008; FAO 2017; World Bank 2018c; World Bank 2019)

Geographic conditions influence both current and historic land-use patterns in India. The country is divided into four major geographic areas (GOI 2009b):

**The Northern Mountains.** This zone contains the Himalayas, as well as fertile valleys and arid, cold deserts.

**The Indo-Gangetic Plains.** Three river systems, the Ganga, the Indus and the Brahmaputra, frame the Plains region, which contains vast stretches of fertile, alluvial soil as well as areas of desert. The alluvial stretches are among the most densely populated areas in the world.

**The Deccan Peninsula.** The Deccan zone covers all of southern India and is highly populated.

**The Coastal Plains and Islands.** This zone includes the Eastern and Western Ghats, as well as the eastern and western coastal plains. This area is densely populated.

The conversion of agricultural land to non-agricultural uses is widespread in India and is caused by ongoing and rapid processes of industrialization and urbanization. Also, forest and grazing lands have often been converted to cropland, from which they are more easily convertible to industrial and commercial uses. (GOI 2009a; Kushwaha 2008)

India's GDP in 2017 was composed of 17.1 percent agriculture, 29.1 percent industry, 16.7 percent manufacturing and 53.9 percent services. (GOI 2018e, *figures add to more than 100 percent, perhaps due to an overlap between industry and manufacturing*)

Sixty-six percent of Indian residents live in rural areas and 34 percent live in urban areas. Approximately 70 percent of India's rural population is engaged in agriculture, with women providing more than half of all agricultural labor. (GOI 2018e; World Bank 2019; FAO 2017; World Bank 2015; Mishra 2018b)

India's geographic and climatic variation (including mountains, plateaus, rivers, forests, deserts, wetlands, lakes, mangroves, coral reefs, coasts, and islands) makes it a biodiversity hotspot. Protected areas comprise 6.0 percent of India's land area; slightly less than 24 percent of India's territory is forested. (Library of Congress 2004; World Bank 2019; GOI 2009b)

India's population has more than tripled since Independence, but its total cultivated area has increased by only slightly more than 20 percent over the same period. Most of the increase in cultivated area has come from encroachments into forest and grazing lands. India has a greater percentage of land in agricultural use than most countries, but due to population pressure, is increasingly seeking to increase agricultural productivity to meet its domestic food needs. (GOI 2009b; Kushwaha 2008)

Land-use practices, combined with natural forces, have led to severe soil degradation in many parts of India. Intensive agricultural production practices during the Green Revolution relied on excessive use of water and fertilizers, resulting in waterlogged and salinized soils, as well as contamination of groundwater and surface runoff. Soil erosion is an ongoing problem in India due to cyclones, flooding, environmentally unfriendly agricultural practices, increasing consumption, industrialization, and other factors. The GOI estimates that 96.4 million hectares (2011-2013 data) are undergoing degradation due to a combination of the above factors. (GOI 2009b; GOI 2016c; Kushwaha 2008; Library of Congress 2004; World Bank 2019)

Rural land use planning is not well developed. While there are restrictions on the conversion of use (particularly on the conversion of agricultural to non-agricultural uses), actual use is not well monitored and encroachments and unauthorized changes in land use are common. Those who do seek to change land use through legal means encounter official corruption and slow-moving bureaucracy. (World Bank 2018c; World Bank 2015)

In recent years the central government has sought to encourage contract farming to boost agricultural productivity and rural incomes. Through contract farming, large processing firms sign pre-season contracts with independent farmers to grow a specific crop, which the firm will then buy at a pre-determined price at the end of the season. Generally speaking, processing firms prefer to contract with large landholders, though they will contract with smallholders where that is the predominate landholding type, as with potato farming in West Bengal. (Mishra 2018b; Pandit 2014)

India's urban population was 460 million in 2018, making up 34 percent of the country's population—a share that is low compared to other countries. The urban population is expected to reach 600 million (40 percent) by 2031, and land-use issues have become more acute as the urban population has grown. An estimated 24 percent of India's urban population is living in slums. According to the GOI, urbanization has been both rapid and uncontrolled, resulting in: (1) environmental degradation; (2) housing shortages; (3) decreased water quality; (4) air and noise pollution; and (5) inadequate sanitation, sewerage, and waste disposal systems. Improperly disposed industrial effluents, along with poorly managed domestic and municipal wastes, have caused extensive soil pollution from heavy metals. (GOI 2009b; UN-Habitat 2010; MOHUA 2016; World Bank 2015; World Bank 2019; Ellis 2016; NITI Aayog 2017)

Many of India's urban centers lack an appropriately flexible land-use planning framework to guide

development and accommodate a rapidly increasing urban population. Impediments to improved urban planning include complex and overlapping bureaucratic institutions, as well as restrictive zoning regulations and overly structured master plans. The latter constrict the urban land supply available for development and reduce the ability of city governments to react flexibly to changing needs. A further constraint on urban land supply is the difficulty of converting agricultural land on the peripheries of cities to non-agricultural uses. One consequence of the lack of available land for urban and peri-urban development is an incentive to encroach onto public lands. (GOI 2009b; World Bank 2015; NITI Aayog 2017)

## LAND DISTRIBUTION

At the time of Independence, India's agrarian system was semi-feudal. In much of the country, large landlords and land tax collectors employed intermediaries to forcibly obtain rents and fees from cultivators. Through these intermediaries, landlords demanded extortionate rents and sometimes subjected tenants to summary eviction. In the late 1940s, tenant farmers accounted for approximately 35 percent of India's rural population. Those who worked the land had little incentive to make investments in the land to increase productivity. (Hanstad and Nielsen 2007; LRAM 2003a)

In the years following Independence (1947), Indian states enacted a series of land reforms intended to both improve equity in land distribution and improve efficiency in agricultural production. These reforms included: measures abolishing intermediaries; measures prohibiting or strictly regulating tenancy; maximum landholding ceilings, with excess land redistributed to the poor; and government allocation of Bhoodan land (nearly 16 million hectares of land donated to the state by landowners between 1951 and 1969), government wasteland (lands that are barren or under-producing), and house sites to the landless. These reforms succeeded in reallocating some of the land in India – 8.5 million hectares under tenancy and ceiling laws alone – from large landholders to the landless and land poor. However, the reforms were plagued by loopholes and faulty implementation, and actually harmed the poor in many instances. For example, to avoid the application of laws granting owner-like rights to tenant cultivators, many landlords evicted tenants or reduced the amount of land leased to tenants. Further, in some states land ceilings laws were avoided by transferring land – in name only – to third parties, by taking advantage of loopholes that allowed religious or charitable trusts to hold land over the ceiling limit, or by holding above-ceiling land as plantations or orchards, which were excluded from application of some states' ceilings regulations. (Hanstad and Nielsen 2007; LRAM 2003a)

Distribution of agricultural land in India remains uneven though rural landlessness is slowly decreasing, and the percentage of land owned by the largest holders is also decreasing. As of 2013, 7.41 percent of rural households were landless (defined as owning no land or less than 0.002 hectares). This is a reduction from 10 percent in 2003. As a percentage of rural households, landlessness rates in select states are as follows: Gujarat 12.5 percent; Madhya Pradesh 5.6 percent; Maharashtra 12.8 percent; Punjab 6.84 percent; and West Bengal 6.6 percent. Medium and large landholders (those owning over 4 hectares) own 25 percent of all agricultural land (down from 34 percent in 2003). The number of small-scale holders (those owning between 0.002 and 1 hectare, known as "marginal farmers," in India) has increased to 75.4 percent (from 69.6 percent in 2003). While some indicators show trends moving toward more equitable ownership, landless and marginal landholders still make up 82.8 percent of rural households. (GOI 2013c)

Fifteen percent of India's total area consists of common property land resources in which all members of the community have access. Such lands include pastures, ponds, cultivated land, drainage channels, house sites, barren land, burial grounds, village gardens, and dense forest. Community wasteland (degraded grazing land, barren land, roadside strips, etc.) and forestland constitute the greatest proportion of common property resources. Common property is important to the rural poor, as it

provides grazing land and water for livestock. However, recognition of common lands (outside of forests) remains weak and as a result, the total area devoted to common property has been declining steadily due to urbanization, household encroachment, industrialization, development projects, and distribution of common property resources to landless families. (Hanstad et al. 2005; GOI 2009a; NRMCM 2017; World Bank 2015)

India has a Scheduled Tribe population of approximately 104 million, 8.6 percent of the country's population. Over half of the ST population lives in central India, and fully a third of all ST households live in three states: Madhya Pradesh, Maharashtra, and Gujarat. The other large area of ST concentration is in northeastern India. ST members are among the poorest and most politically marginalized people in India with just under half of rural ST members living below the poverty line. ST livelihoods and culture are highly dependent on land and 90 percent of ST members live in rural areas. More than 90 percent of the ST workforce is engaged in cultivation, agricultural labor, animal husbandry, and forestry. National land laws and policies, which are implemented by state governments, strictly protect the land rights of ST communities. In practice, however, poor enforcement of these laws as well as conflicts between laws to protect ST land rights and laws on land use and conservation, have resulted in a steady loss of ST lands. This loss is due to land development projects displacing ST populations, conservation policies limiting ST access, and the illegal alienation of ST lands to non-tribal people. As of 2013, 9.4 percent of ST members were landless, and 68.8 percent were small holders (owning between 0.002 hectares and 1 hectare). ST communities have been displaced by development projects at a rate far higher than non-tribals. As a result, many ST families lack rights to the land that they have occupied for generations or have been forced to move from the land altogether. (Hanstad et al. 2005; GOI 2009a; IDMC 2010; GOI 2013b; GOI 2013c)

Over 14 million hectares of agricultural land have been converted to non-agricultural uses since Independence. The poor have not shared in the increase in value that usually accompanies conversion of land to non-agricultural use. Moreover, conversion by the GOI under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (LARR), 2013, deprives the owner of any share of the increase in value resulting from conversion. See *the section on Compulsory Acquisition*. (Hanstad et al. 2005; Hanstad and Nielsen 2007; GOI 2009a; Seetharaman 2018)

Private land is overwhelmingly held in the name of men, with only 10.3 percent of land owned by women. This is due to customary social norms that favor male inheritance. Further, purchased land is generally held in the name of the male head of household. While joint titling of land for married couples is possible in many states (even if uncommon), in other states, such as West Bengal, joint titling is prohibited as a historic means of assisting with the implementation of land ceiling laws. (FAO 2008; NRMCM 2016)

In many parts of India, members of lower castes and certain religious groups, such as Muslims, have lower rates of land ownership and less access to land than other groups. While precise figures are not available, most Scheduled Caste (SC) households (Dalits or members of the lowest caste) are either de jure or de facto landless with 93 percent of SC members owning less than 1 hectare as of 2013. In urban areas, SC households often live in settlements that encroach on government land on the urban periphery. (Khotari 2005; Ramaswamy 2006; Bakshi 2008; GOI 2009a; GOI 2013c)

## **LEGAL FRAMEWORK**

The Constitution requires each state to adopt its own laws on land administration and land reform and grants states substantial independence to legislate land tenure issues. Thus, individual state laws govern most matters pertaining to land. There are areas where the central government and states share responsibility and where central acts govern. Key pieces of central legislation governing land include: the

Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (LARR) (2013), which permits the state governments to take land from private parties for a public purpose; the Transfer of Property Act (1882), which governs land sales and mortgages; the Registration Act (1908), which sets forth land title registration procedures; and the Panchayat (Extensions to the Scheduled Areas) Act (PESA) (1996), the intent of which is to protect the tribal way of life and restore previously alienated ST lands. In addition, the BJP Government national think tank, NITI Aayog, has issued policy documents providing guidance to the states on liberalizing agricultural and urban tenancy and also on contract farming. (Hanstad et al. 2005; Hanstad and Nielsen 2007; GOI 2009a; GOI 2018a; NITI Aayog 2017)

The land legislation of most states is fragmented, sometimes contradictory, and often contains dated provisions. Some states, notably Uttar Pradesh, have reworked their land legislation—creating a single unified land code—with an eye to simplification and modernization. Odisha recently started a project to create a unified land code. (Economic Times 2016a; Indian Express 2018)

After Independence, most states adopted various types of land-reform legislation generally aimed at providing the poor with access to rural land. The three most prominent types of legislation are:

**Abolition of intermediaries.** In the years following Independence, all states adopted laws prohibiting intermediaries (non-farmers who collected taxes and controlled land rights for vast areas of land). As a result, 25 million superior tenants (meaning tenants who often rented to sub-tenants under them) became landowners or direct tenants of state-owned land. However, loopholes in the laws allowed landowners to evict many of the poorest tenants and allowed many intermediaries – rather than the cultivators – to become landowners. As the new landowning group grew stronger economically and politically, it became a force of opposition against reform measures aimed at benefiting those who remained landless. In the process of abolishing intermediaries, many states also simplified and clarified their land legislation and redistributed some land to the poor. Legislation abolishing intermediaries is more important as an historical note than for its current relevance. (Hanstad and Nielsen 2007; GOI 2009a)

**Tenancy reform.** Following Independence, most states adopted tenancy reforms with the intention of eliminating and preventing the exploitation of poor tenants by landowners. Some states prohibit tenancy outright, while others impose pro-tenant provisions that set minimum terms and maximum rents and give tenants the right to assume ownership of the leased land under certain conditions. The tenancy laws also give landlords the right to resume cultivation of their land under certain conditions, which permits landowners to evict their tenants, thereby undermining the intent of the laws. While more than 12 million tenants gained title to the land they till in the decades following Independence, far more were evicted by landowners who feared losing their land. Further, the restrictions on tenancy have reduced the occupational mobility of landowners and reduced the availability of credit and crop insurance to tenants operating under informal (and very often illegal) leases. Some states (Andhra Pradesh and Telangana) have attempted to address the latter issue by adopting legislation which—without formally allowing tenancy—did recognize the cultivation rights of non-owner cultivators (tenants in all but name) and issue identity cards which allow them to access credit and crop insurance. These laws have not been successfully implemented and have not had the desired effect because landowners remain extremely leery of acknowledging that another cultivator is using their land out of fear that legislation granting tenants permanent rights will be enforced against them. (Hanstad and Nielsen 2007; GOI 2009a; NITI Aayog 2016; Andhra Pradesh 2011; Telangana 2011; Murty 2017)

In recent years the GOI has shifted toward a policy of loosening tenancy restrictions. A 2016 report by NITI Aayog recommended that states remove tenancy restrictions to promote agricultural efficiency and

equity. The body drafted a Model Land Leasing Act which would legalize all forms of tenancy, abolish adverse possession clauses that allow tenants to claim permanent land rights, and allow the lease terms and conditions to be agreed upon by the parties themselves. The Model Act has not been adopted directly by any state to date, but Madhya Pradesh adopted legislation that generally follows the guidance of the Model Act. (NITI Aayog 2016; Madhya Pradesh 2016)

Examples of tenancy laws of several states include the following: Gujarat permits leasing in some areas of the state, with tenants having the right to purchase after a certain time. Tenancy of ST or SC members cannot be terminated. Madhya Pradesh recently lifted the restriction on tenancy and land can now be openly and legally leased. Punjab permits leasing, but tenants of big landowners are entitled to purchase the land after six years. West Bengal only permits sharecropping and not fixed rent or fixed produce tenancy. Sharecroppers are protected from eviction. Maharashtra permits leasing with tenants gaining the right to purchase after a certain time. Tenants who are ST or SC members cannot be terminated. However, Maharashtra has passed a new Maharashtra Agricultural Land Leasing Act (2017), which would permit the lease of agricultural land. The law is not yet in force as it still requires Presidential assent. (NITI Aayog 2016; Madhya Pradesh 2016)

In urban areas tenancy has been limited by residential rent control acts. Seeking to encourage increased urban tenancy, the Ministry of Housing and Urban Poverty Alleviation proposed the draft Model Residential Tenancy Act. While rent control falls under state jurisdiction, the center encouraged adoption of the Model Residential Tenancy Act by making provision of central funds under the Rajiv Awas Yojana affordable housing initiative dependent upon state adoption of the Act. The Act has been adopted in Karnataka, Rajasthan, Maharashtra, and West Bengal. (Shenvi 2018; MOHUA 2018a)

**Land ceiling laws.** These laws impose ceilings on the amount of land that can be owned by one person or family and provide a process whereby the state can acquire excess land and redistribute it to the poor. The ceilings range from 3.6 hectares to approximately 22 hectares, depending on the state and type of land. States have redistributed more than 2 million hectares of land, fully 20 percent of which has been in West Bengal. The compensation landowners receive is minimal compared with market value of the land. In some states, beneficiaries receive the land free of charge; in others they must make payments that may equal the amount paid by the state. Generally, beneficiaries may not sell the land for a lengthy period (e.g., 10–20 years in Karnataka) or, as in West Bengal, are permanently prohibited from selling. In many cases, the ceiling laws have not resulted in a significant redistribution of agricultural land, as it has been relatively easy for owners to evade the laws. (Hanstad and Nielsen 2007; GOI 2009a; Landesa 2014)

Two bills amending Gujarat's land ceilings legislation were recently given Presidential assent. The acts permit surplus agricultural land acquired under the ceilings acts of the 1960s to be granted to industries and civic bodies, rather than to landless farmers as originally called for in the Act. These legal changes permit above ceiling land to be granted for non-agricultural purposes but require that other rural land be made available by the government for distribution to landless farmers. (Singh 2018)

While rural land ceiling legislation throughout India remains in force, urban land ceilings legislation has been largely repealed. The central Urban Land Ceilings Regulation has been repealed in nearly all states that initially adopted it. Maharashtra repealed it in 2007 in order to access central urban development funding. It remains in force in West Bengal. (Kurup 2007; Chatterjee 2017)

**Laws allocating state-held land to poor households.** Many states have laws allocating Bhoodan land (land gifted from large landowners), wasteland, and house-site land to poor rural households. As of 2015, five million acres of land had been given to 5.78 million poor farmers, with West Bengal

accounting for just over half of the country's land reform beneficiaries. Many allocations pursuant to wasteland legislation took place in the 1970s and 1980s; six states have now allocated 80 percent of state lands designated as wasteland. In addition, state laws providing house-sites to landless or land-poor rural households have benefited an estimated 4 million households nationwide. (Hanstad and Nielsen 2007; Chaturvedi 2016)

**Contract farming.** In 2018, the central government finalized a Model Contract Farming Act for states to consider adopting. To encourage contract farming, the Model Act clearly protects landowner rights by stating that no ownership or land use rights accrue to the processing company that contracts with farmers. The Model Act also promotes the creation of Farmer Producer Organizations to organize small-scale farmers and help them speak with one voice in contract negotiations and establishes dispute resolution mechanisms. States that participated in drafting the policy and Model Contract Farming Act include Maharashtra, Karnataka, Odisha, Madhya Pradesh, and Punjab. Additionally, Gujarat and Haryana have sought to encourage responsible contract farming by amending the Agricultural Produce Market Commission Act, while other states have adopted fresh legislation, such as the Punjab Contract Farming Act of 2013 (passed in 2015). (GOI 2018a; Mathew 2018; Sood 2015)

**Scheduled Areas.** The “Fifth Schedule” to the Constitution of India declares certain areas—areas of the country with a predominance of ST members (Adivasis)—as “Scheduled Areas.” The purpose of Scheduled Areas is to recognize and protect tribal autonomy and culture. Many states have passed legislation to prohibit or heavily regulate the sale or lease of land within Scheduled Areas to non-ST members. The Indian Supreme Court, in the Samatha decision, found that the Government of Andhra Pradesh cannot lease out land in Scheduled Areas for mining operations to non-tribals because such leases violate the protections provided by the Fifth Schedule of the Constitution. The Court directed the Andhra Pradesh government to stop private mining operations within Scheduled Areas. Under the judgement only cooperatives consisting of STs or public-sector mining would be permitted to mine in Scheduled Areas. This judgement has not protected ST lands nationwide, however, because state and central governments have opted to interpret the findings as only applying to Andhra Pradesh because of the specific language of that state's regulation on tribal land. The use and transfer of land in Scheduled Areas remains a highly contentious topic and alienation of tribal lands remains an on-going concern. (GOI 2016a)

The Panchayats Extension to Scheduled Areas Act (PESA), 1996, extended the panchayat raj (local governance system) to Scheduled Areas. In order to be functional, a state must itself incorporate PESA into state law. Nine states have done so: Andhra Pradesh (and now Telangana), Gujarat, Himachal Pradesh, Madhya Pradesh, Chhattisgarh, Maharashtra, Odisha, and Rajasthan. The stated aim of promoting local governance in Scheduled Areas has, however, largely been undercut by limitations in state implementing rules. (GOI 2016a)

**Land and gender.** The Hindu Succession Act was amended at the national level in 2005 to provide spouses, sons, and daughters with equal inheritance rights to all property, including land. See *the section on Intra-Household Rights to Land and Gender Differences for more information.*

## TENURE TYPES

Three main tenure types are private land, government land, and common land. Of private land, the most common individual tenure types in India are common law freehold and leasehold. Eighty-six percent of arable land is privately owned. Landowners include individuals, corporations, religious institutions, public charitable trusts, and the government. Individuals may acquire land in freehold through purchase, inheritance, gift, or allocation from the government. (Agarwal 2002; Martindale Hubbell 2008; NRM 2017)

Government land is most commonly held by central government ministries or agencies, state revenue departments, state forest departments, railway and defense departments, and local institutions of self-governance (e.g., panchayats). (NRMCM 2017)

There is not a standard legal definition of common land and this category includes many kinds of locally, jointly used and managed lands (and often overlaps definitionally with government land) but generally includes areas for common grazing, village wood lots, village threshing areas, etc. Common property resources make up 15 percent of land area, an area shrinking at a rate of 1.9 percent every five years due to encroachment. In the 2011 Singh case, the Supreme Court, addressing the issue of encroachments into common lands and citing the historic and continuing importance of common land resources to communities as a whole, found that encroachment on common land should not be regularized simply because of long-term occupation or high investment, but should only be regularized in exceptional cases such as where a public purpose is served. The Court included land grants to landless families as a suitable public purpose. (NRMCM 2017; Kohli 2018)

There are significant restrictions on agricultural land leases, as described above. Leases exceeding one year must be in writing. As a result of legal restrictions, approximately 90 percent of leased land is leased informally; such leases are usually oral and are never recorded in the land rights registry. While sharecropping is the predominant form of tenancy, tenancy arrangements vary considerably from state to state. (Martindale Hubbell 2008; GOI 2009a; NITI Aayog 2017)

In West Bengal, registered sharecroppers receive substantial protection under the West Bengal Land Reforms Act, which prohibits some types of leasing and regulates others (such as existing sharecropping). The law gives sharecroppers special protections, including the permanent right to continued cultivation. This right cannot be transferred except by inheritance. The law specifies the allocation of the crop between owner and sharecropper, as well as the circumstances under which the sharecropper can lose his or her rights. Although initial implementation of the Land Reforms Act was not successful, later legislation closed loopholes by more carefully limiting the circumstances under which a landlord could evict a sharecropper in order to personally cultivate the land, for example, by requiring that the landlord live within a certain distance of the field. The government also launched a campaign (“Operation Barga”) to register tenants and educate them about their rights, which proved important to successfully implementing the law. (Hanstad et al. 2005; GOI 2009a; Banerjee et al. 2002; Landesa 2015)

In urban areas, the following types of tenure exist: (1) legal housing on land held in secure land tenure; (2) short-term, but strong, de facto tenure; (3) weak de facto tenure security, including tenure security based principally upon the receipt of basic public services; and (4) insecure tenure, in which a slum occupies land reserved for public purposes, is small in size, or is newly established. According to 2011 urban census numbers, 69 percent of residents in urban areas own the dwellings they live in and 28 percent rent. *(It is unclear whether or how these figures accounted for slum dwellers. It seems likely that only recognized housing was counted.)* (Mahadevia 2010; MOHUA 2016)

Customary laws related to land tenure are discussed in the section on Land Administration and Institutions.

## **SECURING LAND RIGHTS**

Land can be acquired in India through purchase, inheritance, and operation of various state land distribution programs. Land ceiling laws, discussed above, impose ceilings on the amount of land that can

be owned by one person or family. The government is permitted to take land above those ceilings and distribute it to landless or small landholding families. Once acquired, tenure insecurity remains an important issue in India, where a recent study shows that one in four rural homeowners, one in three urban homeowners, and half of all renters express a fear of losing their home. Of rural residents owning a separate plot of agricultural land, close to 20 percent worry about losing this land. The primary reason given for these worries is a lack of proper documentation of rights. The survey also found that only half of owners have taken steps to update their land records and secure their rights. (Hanstad and Nielsen 2007; Deininger 2007; Land Alliance 2016)

India has a dual land record keeping system that includes national and state laws governing deeds registration and state-level laws establishing cadastral-based records of land rights for land revenue purposes. Together, they form a fairly comprehensive, decentralized, and functional land record keeping system. However, the parallel systems are inefficient, as the records maintained by the two systems are sometimes inconsistent. The land transfer system is costly and slow. More significantly, the land records maintained do not constitute absolute proof of land ownership, only strong evidence of ownership. Overall, this dual system often does little to enhance tenure security and, in some cases, renders land tenure less secure. The system often presents an inaccurate picture of landholdings on the ground, due to a large number of unrecorded transactions. Since 2008, there has been a nation-wide push to digitize land records, with the ultimate aim of switching to a Torrens (conclusive title) system (*discussed further in the Land Administration and Government Intervention sections*). The digitization process, however, tends to capture the paper records as they exist, and the program has not had the capacity to investigate conflicts in ownership or complex discrepancies in the records themselves. (Hanstad et al. 2005; GOI 2009a; Haque 2000; Mishra 2017; World Bank 2015; World Bank 2018c)

In rural areas, high transfer fees (stamp fees) have led to widespread informal land transfers (estimated at around 30 percent). (World Bank 2015)

Urban slums have varying degrees of legal legitimacy and in some cities are classified as either "notified" or "non-notified," the former category being recognized by the municipal authority and has quasi-legal status, while the latter has no legal status. Notified slums qualify for basic public services and are eligible for inclusion in urban development programs. Non-notified slums do not qualify for programs because such programs might grant the residents of the slum *de facto* tenure. Notified slums have a degree of tenure security, while non-notified slums have very insecure tenure. (Mahadevia 2010; UN-Habitat 2003)

In many Indian cities, large portions of the urban population live in non-notified settlements located on public or private land on the urban periphery, under bridges and alongside canals, train tracks and highways. Each major city has its own specific classification system for slums and squatter settlements. Delhi, for example, categorizes settlements as follows (Urban Institute 2007; UN-Habitat 2003; Duncan 2007; CPR 2015):

**Jhuggi Jhopri (JJ) Clusters.** Non-notified slums that are squatter settlements located on public land. Tenure for this category is highly insecure.

**JJ Resettlement Colonies.** Areas established as resettlement colonies for evicted residents of JJ Clusters. While tenure terms vary, many households hold ten-year licenses that permit them to reside on the land. Licensees may not sell or lease their land, though these conditions are rarely enforced, and sales are common in some areas. There have been few evictions or relocations from resettlement and relocation colonies.

**Unauthorized colonies.** These settlements are located on land zoned for agricultural use. Original

settlers purchased land legally, though subsequent sales have been made through power of attorney, which circumvents the required stamp duty. Risk of eviction from these settlements is perceived to be low. In recent years the government has established a framework to regularize these colonies.

**Rural and urban villages.** In Delhi, as of 2015, there were 135 designated urban villages and 227 rural villages. The villages maintain land records, and residents do not face eviction, though land title may be difficult to trace. Tenure in these areas is secure.

State and city governments have demolished hundreds of slums, resettling tens of thousands of evictees. Often, the impetus for demolition is new development, city beautification, infrastructure development, or preparations for hosting international events. In 2010, the government destroyed a densely populated slum in Delhi, evicting an estimated 2,000 residents. In Mumbai, state and city governments evicted more than 300,000 people from slums during 2004 and 2005. In Kolkata, state and city governments forcefully evicted 75,000 people from canal-side settlements in 2003. More recent examples from 2017 include the eviction of 3,000 families in Navi Mumbai through slum clearance and the eviction of 1,500 people living under elevated roadways in Delhi. In most of these cases, the government evicted residents without prior notification and with no compensation for lost property, and deprived residents of access to their livelihoods. (Wade 2010; UN-Habitat 2007; Dorairaj 2009; Duncan 2007; ACHR 2004; HLRN 2018)

Compulsory acquisition of land by state and national governments has resulted in the displacement of over 21 million people (some estimate as many as 50 million) for large development projects, such as dams. More than half of these people have been members of ST communities. This is further discussed on the section on compulsory land acquisition. (IDMC 2006; Seetharaman 2018; Singh Negi 2011)

GOI and state policies have rendered ST land rights insecure in many parts of the country. Legislation governing land use by members of ST communities has frequently trumped unwritten customary laws governing land use by members of these communities. Large-scale migration of non-tribals to ST areas is also associated with alienation of ST land to non-tribals as non-tribals encroach upon or illegally purchase ST land. In some cases, ST members have sought to reclaim land rights but face difficulties accessing the legal system. Of those that do, only 41 percent of cases are ruled in favor of ST members who claim to have lost land rights. Commentators have stated that this is due to a lack of funding or legal assistance available for ST members to properly fight these claims and also due to a reluctance to eject current occupants who may have paid for the land. (Hanstad et al. 2005; Hanstad and Nielsen 2007; GOI 2009a; ; GOI 2016a; GOI 2018b; IDMC 2010)

#### **INTRA-HOUSEHOLD RIGHTS TO LAND AND GENDER DIFFERENCES**

Women and girls have inferior rights and access to land in India compared to men. Despite some attempts to address this disparity through legislation, the national and state governments have not historically made broad efforts to close the gap. Research on women's land rights in India has also lagged. (LRAN 2003b; Hanstad and Nielsen 2007)

According to legislation, women have the same right to own land as men. However, despite legal protections and efforts at reform, such as policies and programs encouraging joint titling, women's land rights remain largely insecure. According to the Agricultural Census of 2010-11, women own 10.34 percent of total agricultural land. This proportion has been growing slowly in recent decades. The variations between states are large, with women's land holdings in Punjab being only 0.8 percent land area while women own 21 percent of land in Kerala. The figures on percentage of land owned by women in other select states are as follows: Gujarat 9.4 percent; Madhya Pradesh 6.6 percent; Maharashtra 15.5 percent; and West Bengal 3.3 percent. Overall, ST and SC women own proportionally

less land than other women. (Agarwal 2002; Hanstad et al. 2004; Hanstad et al 2005; Srivastava 2011; NRMCM 2016)

When land is titled separately in the name of women or even titled jointly by wife and husband, women's actual control over the land is often still limited. Social and cultural practices exert pressure on women to cede ownership or control over land to their husbands or brothers. Rural women in particular have little access to or control over land. Eighty-six percent of rural women depend on agriculture for their livelihoods, yet women's access to and control of agricultural land is extremely limited. (GOI 2000; Agarwal 2002; Hanstad et al. 2004; Hanstad et al. 2005; GOI 2009a)

Inheritance is by far the most common way of acquiring land in India. Until recently, India's inheritance laws did not grant women and girls the right to inherit property equally with their brothers or other male heirs. In the late 1980s and 1990s some states (Maharashtra, Karnataka, Tamil Nadu, and Andhra Pradesh) amended the Hindu Succession Act to provide equal inheritance rights for sons and daughters. The Hindu Succession Act Amendment (HSAA) was adopted at the national level in 2005 legally granting widows, sons, and daughters equal inheritance rights to property when a father dies intestate (the majority of inheritance transfers). The Hindu Succession Act governs inheritance of most of India's population (83.6 percent). Muslim Personal Law and other laws govern minority groups. (Hanstad et al. 2005; GOI 2009a; Deininger 2014; Deininger 2010; Sircar 2014; Brule 2010)

While the HSAA aims to create equal inheritance rights, it has been largely ineffective in practice. Widows and daughters often do not assert their legal rights, and this reluctance stems from a variety of social and cultural causes related to dowry, concerns about personal security, and other factors. One study in early adopting states (Maharashtra and Karnataka) did find an increase in the likelihood that a woman would inherit land, though remaining much less likely than that of male heirs (Deininger 2014). There are signs among the early adopting HSAA states of increased inheritance for women and other indicators of women's empowerment such as higher-level education achieved and later marriage ages. Further, early study results indicate a pronounced second-generation positive impact for women and girls. Another study in five other states (Meghalaya, West Bengal, Rajasthan, Andhra Pradesh and Madhya Pradesh) found, however, that the HSAA had yet to have a significant impact on women's inheritance. (Deininger 2014; Deininger 2010; Sircar 2014; Brule 2010)

While it may be too soon to conclusively determine how useful the HSAA has been, it is clear that implementation on the ground has blunted its impact. Notably, women in a three-state study (Andhra Pradesh, Bihar, and Madhya Pradesh) were found to want to own land given its income potential and safety net value, but only 11 percent wanted to inherit land from their parents due to fears about straining family relationships or provoking community condemnation. Women who do desire to assert inheritance claims are often unaware of the process they should follow. Further, local revenue department functionaries have been found to be insufficiently trained or simply unwilling to help women pursue inheritance claims. (Sircar 2014)

Women lack equal land rights under marriage and divorce laws. Although dowry is illegal, the practice is widespread, and a daughter may lose her inheritance because communities consider dowry and wedding costs paid by her family to represent the daughter's full share of her claim to family assets. Land purchased by the family during marriage is presumed to be the property of the husband unless the wife's name appears on the title. None of the laws governing marriage or divorce gives the wife ownership rights to any land held by her husband in the event of divorce. She does have the legal right to property given to her and she does have the legal right to monetary maintenance from her former spouse. (Hanstad et al. 2005; Hindu Marriage Act 1955; Muslim Women Protection of Rights on Divorce Act

1986)

Previous land reform efforts have largely failed to strengthen women's land rights. Although the post-Independence central government directed states to title reallocated land jointly to husbands and wives, or individually to women, this rarely happened. First, most states did not include this directive in their land allocation programs. Second, even when the states did include these directives, they rarely implemented them. In recent years, however, the state of Karnataka has directed, with apparent success, that officials title housing benefits to women individually. Further, in West Bengal the government purchased and allocated small plots of land to landless families and granted such titles jointly to married couples. In Odisha, government programs to grant titles to encroached upon government land and regularization and titling of previously communally titled land, have both required joint titling of land to married couples. (Hanstad and Nielsen 2007; Santos 2013; Savath 2014; Landesa 2014)

Because women in many ST communities depend on forest and land resources for their household work, their social status and their control of community resources, the loss of these resources often affects them more than the loss affects men. (LRAN 2003b)

Women's ability to own and control land is becoming an important issue not only from an equality perspective, but also because women are increasingly taking on a greater role within the agricultural sector as men migrate to urban areas and to non-farm sector employment. As a result of out-migration, women-headed or women-managed households now comprise about 32 percent of rural households. In recent decades, rural men have taken up non-agricultural work at a faster pace than rural women. National Sample Survey data indicates that the proportion of women workers in agriculture is higher than men and that in absolute terms, there are an increasing number of women farmers. (It is important to note that women's involvement in agriculture varies dramatically according to region, religion, and caste.) While women are increasingly involved in agriculture, their potential is stunted because they may have little or no decision-making power in agriculture or control over landholdings, and further, they cannot use land as collateral for loans if the land is in the name of the husband who has migrated for work. Women are largely viewed by society as helpers rather than farmers. Cases where they are full-fledged decision-makers is on smaller holdings that they control themselves or in some women's group farming programs. (Saxena 2012; Srivastava 2011; Landesa and Oxfam 2013)

Several Indian studies have found a negative correlation between women's land ownership and gender-based violence. Research from Kerala found that women who owned either land or a house faced significantly lower risk of marital violence. A more recent study in Uttar Pradesh found that women's ownership of property was linked to a significant reduction in violence. Globally though, the evidence is mixed and, in some settings, women's assertion of land rights, such as through inheritance, was associated with increased risk of domestic violence, particularly in areas where traditional norms dominate. In the South Asian setting, however, there are indications that property ownership reduces the incidence of domestic violence so long as such ownership is paired with a woman's decision-making authority and influence within the household. Policy strategies to encourage women to assert land rights need to be crafted with sensitivity to this issue. (Panda 2005; Bhattacharvva 2011; Richardson 2015; Landesa and Oxfam 2013; Boudreaux 2018)

## **LAND ADMINISTRATION AND INSTITUTIONS**

Each state has its own land-records legislation and administration.

Land administration is generally overseen by three state-level bodies: (1) the Revenue Department, which is responsible for updating and maintaining land revenue records (the record of rights and

mutation register) and governed by state law; (2) the Survey and Settlement Department, which maintains spatial land records, also governed by state law; and (3) the Stamps and Registration Department, which oversees the registration of sales deeds, mortgages and some leases and is regulated at the national level by the Land Registration Act (1908). (Hanstad et al. 2005; GOI 2009a; Mishra 2017)

Generally speaking, land administration institutions in India are perceived to be inefficient, mismanaged, unreasonably costly, and prone to corruption. Furthermore, some state Revenue Departments have been assigned many other tasks unrelated to land record maintenance, especially in the event of a natural disaster or widespread crop failure. There are wide variations between states in terms of the efficiency of land administration departments and the resources dedicated to land record maintenance. West Bengal, in particular, is known for having an efficient and largely well-managed land administration system. (Deininger 2007; Hanstad et al. 2004; GOI 2009a; World Bank 2015; NRM 2017)

The tasks of administering various types of lands by additional departments is a source of confusion and leads both to overlapping administration efforts and to gaps. In addition to the Revenue Department, which administers agricultural land and some common lands, the Forest Department manages forest land, some of which is used for agriculture, and land for rural housing is managed by local governance bodies. In urban and peri-urban areas, land is managed by Urban Land Boards, land use planning is overseen by Town and Country Planning Departments under the Urban Development Department. Land for industry is often acquired and managed by Industrial Development Boards. In many cases there is a lack of systematic sharing of information between these bodies. (World Bank 2015)

The central government has sought to modernize the land records system through the promotion of land records digitization in the states. The Digital India Land Records Modernization Programme (DILRMP) (launched under a different name in 2008) seeks to computerize all land records, spatial maps, and the deeds registry as well as update all survey and settlement records. The stated policy aim is to move toward a Torrens (conclusive) title system rather than deeds registration, though commentators see this as a particularly difficult aim given current circumstances, and others caution that deeds registration is a workable system used in many other economically strong countries. Changes to the three-part land administration system have not been a present aim of the reforms. Programs to improve land records are further discussed under the section on Key Issues and Government Initiatives. (Hanstad et al. 2005; Mishra 2017)

In Scheduled Areas, customary laws traditionally dictated the use and control of land. This was and still is especially true in the states of northeastern India. Under customary law, the village chief or elders typically controlled land on behalf of the community and resolved land disputes. However, laws governing the use of forest land and laws requiring the registration of land ownership have undermined customary practices and communal land ownership. Survey and settlement laws and procedures rarely recognize customary land rights. (Hanstad et al. 2005; GOI 2009a)

## **LAND MARKETS AND INVESTMENTS**

Relative to per capita GDP, non-agricultural land in India is the most expensive in the world, though in recent years the property market has cooled, with analysts stating urban markets, in particular, were previously overpriced. The market was also slowed by government interventions, such as the Real Estate (Regulation and Development) Act, which regulates larger property developments to protect homebuyers, and the demonetization of high-value currencies, undertaken to reduce black market real estate transactions. Also, the goods and service tax (GST) was implemented for real estate transactions starting in July 2017. Foreign Direct Investment (FDI) is prohibited in real estate, and foreigners are prohibited from owning farmland. (Deininger 2007; USDOS 2017; Sharma 2018; Ellis 2016)

To register a land-sale transaction in India, the parties must complete six procedures, a process which takes an average of 46.8 days and costs an average of 7.7 percent of the value of the property. The procedure for registering property is as follows: (1) visit the office of Sub-Registrar of Assurance to check for encumbrances; (2) ensure that the land is clear of all local taxes due; (3) prepare the final deed; (4) pay the stamp duty on the final sale deed; (5) execute the final sale deed before two witnesses and submit documents required documents to the Sub-Registrar of Assurance; and (6) apply to the relevant local land records office to update the land records via “mutation.” India ranks 135<sup>th</sup> out of 190 countries with regard to the relative ease of registering property transactions. (World Bank 2017; Mishra 2017)

Tenancy laws either prohibit or greatly restrict new agricultural tenancies. In states where agricultural tenancy is legal, there are a variety of restrictions, including limiting the amount of rent that can be charged; granting tenants on-going cultivation rights; setting minimum lease durations; and allowing owners to end long-term leases only in order to resume personal cultivation of the land. During the period of tenancy reform, the level of leasing in formal rental markets declined substantially. India’s National Sample Survey Organisation (NSSO) recorded a decline in households leasing in land between 1971 and 2003 from 25 percent in 1971-72 to 18 percent in 1982, to 15 percent in 1992, to 12 percent in 2003. However, the most recent numbers show an increase to 14 percent in 2012-13. The percentage of households leasing in land in select states is as follows: Gujarat 6.2 percent; Madhya Pradesh 5.6 percent; Maharashtra 8.4 percent; Punjab 15.8 percent; West Bengal 17.8 percent. Countrywide, Andhra Pradesh reported the highest rates of leasing in land at 37.2 percent of households. These figures certainly underreport agricultural tenancy since most tenancy is not legally recognized. Bearing this in mind, it is still interesting to note that NSSO data from 2003 found that 36 percent of tenant farmers were landless and 56 percent were small-scale landowners, owning less than one hectare, implying that tenancy is a useful means for landless and near-landless families to access land for cultivation. (Deininger 2007; Hanstad and Nielsen 2007; Haque 2000; NITI Aayog 2016; NSSO 2006; NSSO 2013; World Bank 2018c)

Understanding that restrictions on tenancy leads to concealed tenancy, which results in insecure tenancy arrangements and disincentives to invest in improvement productivity, attitudes within India on tenancy are beginning to loosen policies at the national, and states are considering liberalizing tenancy restrictions. (World Bank 2018c; Goswami 2013; Fahmuddin 2012; Deininger 2012; NITI Aayog 2016)

The laws of many states restrict the ability of land-reform beneficiaries to transfer land they receive from the state. Some states prohibit transfers, others allow them only after a specified period, while others require approval by the local land administration authority prior to transfer. In addition, most states prohibit sales of land from ST members to non-ST members. (Hanstad and Nielsen 2007; Deininger et al. 2007; NRMCC 2017)

Mortgage-secured loans represent the equivalent of only 2.5 percent of India’s GDP, a very low rate of lending compared to that found in most developed countries (25–60 percent). Commercial banks are becoming more active in writing home mortgages however, with the mortgage loan growth rate remaining strong within the banking industry. Seventy percent of the mortgage market is in India’s major urban centers; many loans for housing investments are made informally, outside the organized financing sector. Loans for housing, including the household land plot, generally require a 24–46 percent down payment, precluding access for many low-income households. (Economy Watch n.d.; Economic Times 2010; Tripathy 2016)

A World Bank study analyzing land sales between 1982 and 1999 yielded several findings. First, land-sales markets were less active than rental sales markets. Second, land sales increased as economic growth

increased. Third, land-market participation by ST members was uniformly low. Fourth, distress sales for poor households were very common, pointing to limited access to credit and household subsistence constraints as primary motivators for sales. Fifth, land sales generally increased the landholdings of the labor-rich, while decreasing the holdings of those with low labor capacity or lower per capita landholdings than buyers. This pattern resulted in a net increase in productivity and wealth among buyers and sellers. Sixth, the land purchase market was considerably more active in the south than in the north. Seventh, a significant number of transactions took place outside formal market channels. The study also noted high transaction costs for land sales, especially through application of the stamp duty (equivalent to more than 10 percent of the land value). (Deininger et al. 2007)

In urban areas, high land costs historically induced state governments to adopt rent control acts, which unintentionally led to a decline in available rental stock. In recent years many states have repealed rent control acts (but not Mumbai, although repeal or amendment is under discussion). (Ellis 2016)

### **COMPULSORY ACQUISITION OF PRIVATE PROPERTY RIGHTS BY GOVERNMENT**

While most land-related topics in India are governed by state law, the compulsory acquisition of land by the government is governed concurrently by states and the central government. Land acquisition is a contentious issue in India, where land is often desired for large infrastructure and development projects, but where gaining the necessary tracts of land on the open market can be difficult for developers due to fragmentation of holdings and confusing landownership issues. In some instances, government land acquisition is viewed as a way of “cleansing” disputed title for tracts of land. At the same time, the country has a history of displacing vast numbers of people without providing adequate compensation and assistance with resettlement. Fifty million people are estimated to have been displaced due to development projects over a 50-year period ending in 2011, with just under half being displaced by dam construction. Such displacement disproportionately impacts members of STs and SCs. Women are also uniquely impacted as they are often not specifically notified of acquisition plans, not invited to meetings and not included in resettlement negotiations. Further, if compensation is granted, it is generally paid to the male head of household. (IDMC 2010; Levien 2017; Seetharaman 2018; Singh Negi 2011; World Bank 2018b)

In 2014 the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (LARR) came into force, replacing the Land Acquisition Act of 1894. The old Act was considered to favor the interests of the government and developers at the expense of private landowners. Important changes brought about by the LARR include: requirement to obtain consent by affected families (70 percent or 80 percent, depending on whether the project is public or private); necessity of conducting a social impact assessment (SIA) in most cases; higher compensation (two times the market rate for rural land); payment of a solatium (100 percent of compensation); and assistance with rehabilitation and resettlement. Segments of government and also property developers considered the LARR a swing too far in the direction of landholder rights and various attempts have been made to dilute the LARR’s provisions. The central government passed Amending Ordinances in 2015 that softened the public consent and social impact assessment requirements. Due to political pressure the Ordinance has since been allowed to lapse. (Seetharaman 2018; Kohli 2017; LARR Act 2013)

Individual states have found other ways to dilute the provisions of the LARR. States, with Presidential assent, are permitted to amend the LARR and can also adopt their own implementing rules separate from those of the central government. As of September 2018, eight states had amended the LARR: Gujarat, Telangana, Maharashtra, Tamil Nadu, Andhra Pradesh, Jharkhand, Haryana, and Rajasthan. Gujarat exempts the following projects from the consent and SIA requirements: those important for national security or defense, rural infrastructure, affordable housing, industrial corridors, and other

infrastructure projects, including those under public-private partnerships. In Maharashtra, only private projects (not public-private partnerships) require consent and an SIA. Several states have also moderated the LARR's impact by enacting separate implementing rules: Andhra Pradesh, Assam, Bihar, Himachal Pradesh, Jharkhand, Sikkim, Tamil Nadu, Telangana, Tripura, and Uttar Pradesh. Further, before the LARR Rules were adopted, Madhya Pradesh and Chhattisgarh passed notifications changing the LARR Act's limitations on the taking of agricultural land. The LARR limits the acquisition of agricultural land to not more than 5 percent of the total net sown area in the state; Madhya Pradesh changed the limit to 50 percent, effectively eliminating the limit. (Kohli 2017; Seetharaman 2018)

Policy tension clearly exists between the spirit of the LARR, which sought to protect the interests of local communities and landowners, and the desire to spur on economic development and growth in a setting where acquiring land can be difficult. Responding to the latter goal, a number of states have diluted the restrictions of the LARR, namely by restricting the sorts of projects that require an SIA, eliminating public consent requirements in many cases, limiting the provision that unused land be returned after five years, reducing food security safeguards, and altering the calculation of compensation. The subject remains contentious. (Kohli 2017)

As an alternative means to securing land for large development and infrastructure projects, some state governments are using land pooling. Through pooling, landowners voluntarily relinquish their land (without monetary compensation) for development and the government agrees to later return part of the land back to the original owners. The concept is that due to the increased value post-development, even a smaller parcel returned will be worth at least as much if not more than the landowner's original land. Land pooling is being used in the development of Andhra Pradesh's new state capital. Critics of the Andhra Pradesh project have said that land was not always voluntarily relinquished. Land pooling was also used to develop a Special Economic Zone (SEZ) outside of Jaipur, Rajasthan, but the return of small land plots to those who originally lost farmland did not adequately compensate for the loss and the contributing communities were not economically integrated into the SEZ growth. Most farmers (75 percent) felt they lost more than they gained, with lower caste farmers faring worst. Further, the loss of grazing land was particularly harmful to women, who lost the limited economic autonomy that livestock rearing provided. Delhi also recently started using land pooling to acquire land for housing projects and infrastructure development. (Seetharaman 2018; Levien 2017; Chandran 2018; Kohli 2018)

Foreign investment and industrial development in India have been facilitated by the creation of industrial parks or SEZs. SEZs are established largely to attract foreign investment and expand Indian exports. SEZs are primarily governed by the Special Economic Zone Policy of 2000 and the Special Economic Zone Act, 2005. SEZ investors can receive financial and infrastructure benefits, as well as land on which to operate their business. Projects are developed in conjunction with the central or state governments, or a combination of both. Land acquired by the government for SEZs has led to large-scale involuntary displacement of landowners and land occupiers, and substantial conversion of agricultural land to non-agricultural use, especially in Scheduled Areas. State acquisition of land is used (rather than private purchase) because investors find it difficult to acquire large tracts of land in desirable locations. Regulators have often considered employment generation or development a sufficient "public purpose" for such takings. Land acquisition for SEZ and industrial parks remains a highly divisive issue and policy interpretation remains in flux.

While many successful SEZs have been built through central and state initiatives, the overall record for meeting economic development and job creation goals is mixed. A new model, Scheme for Integrated Textile Parks (SITP), has proven more successful, with the big innovation being the active inclusion of park users in design and implementation at an earlier stage and to a greater degree. Most of these relatively successful parks were established in the western and southern states namely, Gujarat,

Maharashtra, Tamil Nadu, and Andhra Pradesh, and often in secondary cities. (GOI 2009a; GOI 2009c; Saleman 2014; Kumar 2016)

## LAND DISPUTES AND CONFLICTS

Land disputes are an enormous problem in India. It is estimated that 67 percent of civil cases involve land and property disputes. Cases drag on for years, taking an average of 20 years to be resolved. One study found that land disputes affect 28 percent of all plots in peri-urban Andhra Pradesh and other evidence also indicates that disputes are highest in peri-urban areas where land prices have increased. Much of the land that the government has declared to exceed established ceilings remains undistributed while litigation is pending. In addition, the prohibition against transfers of ST land to non-tribals has created a substantial number of land disputes. (Deininger 2007; GOI 2006; Hanstad and Nielsen 2007; NITI Aayog 2017; Mishra 2017; World Bank 2015; World Bank 2018c)

Several states have sought to ease the length and cost of resolving land disputes by establishing specialized land tribunals. Bihar established a two-tiered dispute resolution system within the Revenue Department and introduced deadlines for ruling on disputes. It also established a Land Tribunal to remove land conflicts from the civil courts. Early research has judged it a success in clearing the backlog of land disputes. In 1999, West Bengal established a specialized land court, the West Bengal Land Reforms and Tenancy Tribunal. It has also been judged successful in clearing the backlog of disputes, though cases that are appealed to the state's highest court have stalled because only one to two of the four benches have been functional. (Das 2014; Landesa 2014)

Land conflicts related to infrastructure development via land acquisition are an ongoing difficulty both for landowners, who may lose land, and governments and businesses who seek large pieces of land for development. One study found that a quarter of large land development projects were stalled by land disputes, with the disputes usually focusing on compensation or feared environmental impacts. Sometimes violent protests have delayed the development of industrial projects. Land acquired by state governments for SEZs has been especially controversial and has sometimes led to violence. In West Bengal in 2007, the state government sought to acquire land for a petrochemical plant. Farmers unwilling to give up their land formed a resistance group supported by some political parties and non-governmental organizations. A confrontation between the farmers and police left 14 protesters shot dead and 71 wounded. (Mahmood and Sengupta 2007; World Bank 2006a; Ramachandran 2007; ISB 2016; Kohli 2018)

Conflicts over forests and agricultural lands have occurred in the eastern and northeastern states of India. These disputes are rooted in longstanding inter-communal, ethnic and separatist conflicts. In Scheduled Areas, disputes related to the illegal alienation of ST land to non-tribals are common and further, districts with Scheduled Areas have been found to have 1.5 times greater number of land conflicts than the national average with ST members being disproportionately impacted by land disputes. (Library of Congress 2004; HBS n.d.; Deininger 2007; IDMC 2010; TISS 2016)

In the central states, the Naxalite movement – an armed movement begun in the 1960s to protest landlessness – peaked around 2010 but remains an important security issue. Naxalite-impacted districts have 1.5 times more land disputes than average. Conflicts over land and mineral rights have displaced an estimated 450,000 members of ST communities. In mid-2010, this conflict affected 20 of India's 29 states; the worst-affected states are Chhattisgarh, Jharkhand, Odisha, and West Bengal. The GOI mounted an offensive called Operation Green Hunt against the insurgents in 2009, causing the displacement of 100,000 ST members from Chhattisgarh to Andhra Pradesh between mid-2009 and mid-2010. The Naxalite movement took hold in areas where poor lower-caste families reside in mineral-rich

lands, and the movement has leveraged perceived injustices related to government sale of land and mineral rights to private companies. The Naxalites seek to persuade or coerce landless ST families to oppose the government and its plans for industrialization of the area. Civilians have often been caught in the crossfire during violent clashes between government and Naxalite forces. Naxalite violence was high in the mid-2000s, and while still a major security priority of the GOI, has declined significantly since 2010. (Ramesh 2006; IDMC 2010; TISS 2016; Economic Times 2018b)

## KEY LAND ISSUES AND GOVERNMENT INTERVENTIONS

India's land-reform efforts have had limited success and India's rural poor generally have not seen improvements in their tenure security or improvements in their access to land. ST members in particular have not only not seen improvements but have had their land rights further eroded. Land-ceiling laws are easily evaded by landlords and have not resulted in redistribution of significant amounts of land to the poor (with the exception of West Bengal and Kerala). Tenancy reform laws have done little to enhance tenure security among the poor and, in many respects, have made it harder for poor families to access land through lease. Women's land rights have been enhanced legally, but little change has yet to be seen on the ground. (Hanstad et al. 2005; GOI 2009a)

The central government's key policy priorities are laid out in a 3-year Action Agenda (FY2017-19). In this agenda, the key priority related to land is to enhance agricultural productivity with a goal of doubling farmers' incomes by 2022. The means targeted to meet this goal are as follows: increased land productivity, liberalized land tenancy markets, modernized land ownership records, and increased land productivity. (NITI Aayog 2017; World Bank 2018a)

One means by which the government hopes to increase land productivity is through the promotion of contract farming, and it has created a Model Contract Farming Act to encourage states to promote contract farming. See *the Legal Framework section for more details*. (GOI 2018a; Mathew 2018; Sood 2015)

To encourage liberalized tenancy land markets, the central government has created a Model Land Leasing Act, which it encourages states to adopt. The government's goal is for two-thirds of states to have liberalized land leasing by March 2020. So far, Madhya Pradesh and Maharashtra have loosened their previous restrictions on tenancy. (NITI Aayog 2016; Madhya Pradesh 2016)

Land record modernization is promoted by the Digital India Land Records Modernization Programme (DILRMP) launched in 2008. It sought to create a system of real-time, computerized land records. The program has not been judged very successful, however, with the present government pointing to underfunding and design problems. The government seeks to reform this program with a goal of implementing updated digitized land records in at least two-thirds of the states by March 2020. In 2008 the GOI also announced that a Torrens titling system (conclusive, guaranteed titling) was the ultimate goal of its revamp of land titling. Virtually no progress has been made on this, save in urban Rajasthan which passed the Rajasthan Urban Land (Certification of Titles) Act in 2016, but it is too soon to know the outcome of this Act. A government organized committee on land titling further proposed in 2014 that systematic land titling be taken up nationwide starting with dispute-free and recently surveyed lands. It also proposed the establishment of a Land Titling Authority and Title Registration Offices, which would consolidate land administration. Again, the initiative has stalled and necessary steps, including the passage of legislation (a Land Titling Bill has been created at the central level), has made no progress. (NITI Aayog 2017; GOI 2014; Mishra 2017)

While many states have either completed or are on their way to computerizing their land records (86 percent of land records according to one source), only 47 percent of the mutation records (recording

transfer of ownership) have been computerized. This indicates that progress is being made on digitizing existing land records, but that current data on actual ownership is not being digitized. Further, evidence indicates that existing land records are being computerized, but without verification of the correctness of the records vis a vis ground reality. In places where re-verification and re-survey are being conducted, there have been signs of problems, such as in Gujarat where re-survey work and the promulgation of fresh land records has been halted due to problems and complaints from landowners about errors and irregularities. The effort remains a work in progress. (Mishra 2018a; Mishra 2017; Times of India 2018)

The Ministry of Rural Development established a nationwide program, Mahila Kisan Sashaktikaran Pariyojana (MSKP), the women farmers' empowerment program. Program goals include building strong community institutions of women farmers and promoting women's agriculture. The program specifically seeks to engage landless individuals and small-scale farmers as project participants. State-level programs, such as Kudumbashree (KDS) in Kerala and Indira Kranthi Patham (IKP) in Andhra Pradesh, also seek to empower rural women and build livelihoods through the building and support of women's farming collectives. (Landesa 2013a)

A few state initiatives have sought to enhance women's land rights, such as joint titling programs in Karnataka, Odisha, and West Bengal, where government-distributed homestead land was jointly titled. Further there are reduced stamp duties (land transfer taxes) on land registered to women in Haryana, Punjab, Delhi, Himachal Pradesh, Madhya Pradesh, and Uttar Pradesh. These states amended the Indian Stamp Act, 1899. Other programs, such as women's collective farming groups in undivided Andhra Pradesh and Kerala have sought to support women as farmers in their own right. (NRMCC 2016; Agarwal 2017)

SABLA is a centrally sponsored program organized through the Ministry of Women and Child Development to empower girls aged 11 to 18. It was initiated in 2011, is ongoing, and focuses on health, life skills, education, and economic empowerment. (Landesa 2013b)

A Women Farmers Entitlement Bill, 2011, introduced in the Rajya Sabha remains pending. The bill promotes the recognition of women as farmers, recognizes and protects their household land rights, and would issue them official farmer recognition cards, which would allow them to access credit and agricultural services. It is thought unlikely to be adopted, however. (Bedi 2018)

For many years rural poor families have been able to obtain a modest house under the centrally funded Indira Awas Yojana (IAY) rural housing project, now called Pradhan Mantri Awas Yojana (Gramin) for rural areas and Pradhan Mantri Awas Yojana (Urban) for urban areas. At times this program has provided limited land purchase support. Several states, including Karnataka and West Bengal, have instituted their own house-and-garden plot programs. (Rajput 2007; GOI 2010b; NITI Aayog 2017)

In terms of urban land policy, centrally-sponsored programs include: Rajiv Awas Yojana (RAY), which seeks to bring all existing slums (notified or not) within the formal system; the Heritage City Development and Augmentation Yojana, to develop historic cities such as Varanasi; the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), to provide core services to every household in 500 cities; the Smart Cities Mission, which utilizes e-governance to improve service delivery; and Housing for All Scheme (Urban), which aims to provide all economically weak urban households with homes by 2022. (Shenvi 2018; MOHUA 2018b)

Through the Slum Rehabilitation Authority (SRA), the state of Maharashtra is responsible for surveying and reviewing existing slums in greater Mumbai and formulating and implementing slum rehabilitation schemes. Starting in 1995, a slum rehabilitation scheme was adopted whereby private developers can

purchase slum land from the government at below market prices for redevelopment. After purchasing the slum land and obtaining the consent of 70 percent of slum dwellers, the developer can build multi-story tenements provided for free to those who can prove they have lived in the slum since 2000. In exchange, developers can construct and sell higher value residential properties on the remainder of the former slum area. Problems noted with this model include disagreements between developers and slum dwellers over redevelopment plans, poor quality buildings, cut-off dates that exclude some slum dwellers, and further land market distortions. (SRA 2018; Zhang 2016)

The Delhi Master Plan 2021, developed in 2007, paved the way for the regularization of over 1,500 unauthorized settlements in Delhi. The plan's stated intentions are to concentrate and redevelop settlements, thus creating space for the urban poor in the capital. However, the plan also allows for commercial development in these settlements, though developers are required to reserve a portion of housing for low-income households. In September 2018, the Delhi Development Authority approved a Land Pooling Policy through which smaller plots of peri-urban and rural lands can be converted into large pieces of land for development, with around half of the original land area given back to the landowners. (DDA 2007; Economic Times 2018a)

## **DONOR INTERVENTIONS**

In 2019, USAID launched a partnership with PepsiCo to increase women's involvement in its agricultural supply chain in West Bengal State including an assessment of relevant land rights issues. This work is part of the Women's Global Development and Prosperity Initiative (W-GDP). USAID has also provided support in the agricultural sector to share agricultural technology, build agricultural extension institutional capacity, and support economically vulnerable communities. (USAID 2018b; White House 2019)

In its FY 2018-21 Strategic Partnership, the World Bank states that it will support the GOI's priority of doubling farmers' income by 2022 through programs to support diversified income-generating opportunities in rural areas while also seeking to improve efficiency in the use of land and water resources in agriculture. It will also support the promotion of commercial and export-oriented agricultural sector, while also consciously including women through the integration of women's self-help groups and gender inclusive implementation. (World Bank 2018a)

Ongoing World Bank projects that meet these objectives include: Rajasthan Rural Livelihoods Project; North East Rural Livelihoods Project; National Rural Livelihoods; National Dairy Support Project; Uttar Pradesh Sodic Lands Reclamation III Project; Maharashtra Agricultural Competitiveness Project; Maharashtra Project on Climate Resistant Agriculture; Rajasthan Agricultural Competitiveness Project; Sustainable Livelihoods and Adaptation to Climate Change; Telangana Rural Inclusiveness Growth Project; National Agricultural Higher Education Project; Himachal Pradesh Horticultural Development Project; Andhra Pradesh Rural Inclusiveness Growth Project; Assam Agribusiness and Rural Transformation Project; Tamil Nadu Rural Transformation Project; Tamil Nadu Irrigated Agricultural Modernization Project; Jharkhand Opportunities for Harnessing Rural Growth Project; Bihar Transformative Development Project; and Biodiversity and Conservation and Rural Livelihoods Improvement. (World Bank 2018b)

FAO's programmatic priorities are not specifically focused on land policy but mirror the World Bank in focusing on improved agricultural productivity and increased farm incomes. This work includes projects to: strengthen and empower rural organizations including especially women groups and farmer organizations to access resources, services and markets; support to GOI to monitoring agricultural policy; provide gender sensitive extension services to small-scale farmers; and support the

implementation of climate resilient agriculture. (FAO 2018)

One ADB funded project that is worth highlighting is the Madhya Pradesh Irrigation Efficiency Improvement Project. The project includes development of the Kundalia Irrigation Project, a pressurized pipeline distribution system for irrigation, which will also supply water for drinking and industrial uses. Following ADB guidelines, the project must take special care to include gender considerations in the resettlement and compensation plan for those losing land. (ABD 2017b)

## **2. FRESHWATER (LAKES, RIVERS, GROUNDWATER)**

### **RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION**

India has sizeable water resources, but these vary widely by season and region. Seventy to 95 percent of rainfall occurs during the southwest monsoon (between June and September). Nationally, annual rainfall is 1,170 mm, but this varies greatly; for example, the northwest desert receives only 150 mm of rain, central India receives 500 mm, and very wet coastal areas of the northeast receive 2500 mm. Per capita water availability in India has fallen dramatically since Independence both due to increased population and to declining groundwater resources. Water supply per capita was 1545 cubic meters in 2011 but is expected to decline to 1341 cubic meters by 2025. Demand for water has grown and will continue to grow along with population, industrialization, and urbanization. Agriculture, which relies heavily on irrigation, consumes more than 90 percent of India's water. (FAO 2010a; FAO 2011; GOI 2017; Kumar et al. 2005; World Bank 2019)

Ninety-six percent of the urban population and 91 percent of the rural population have access to an improved water source (not necessarily within their home). Access varies greatly by region. Despite this relatively high rate of access for urban areas, slums often face water shortages. While some slums have public water sources, these sources are often only useable for a few hours daily. The GOI estimates access to organized, piped water supply at approximately 70.6 percent in urban areas and 30.8 percent in rural ones. The rest of the population relies on untreated surface or groundwater. According to the government, inadequate access to sanitation and safe drinking water is the main reason for prevailing ill-health and morbidity levels in the country. (UNESCO 2006; Duncan 2007; GOI 2001b; GOI 2009b; GOI 2013d; NITI Aayog 2018; WHO 2017)

Water in India comes primarily from rainfall and Himalayan mountain snowmelt, although a significant amount of India's water also comes from neighboring countries. The country's rivers fall into four groups: (1) those originating in the Himalaya region and flowing continually due to snowmelt and heavy monsoon rains; (2) rainfed rivers in the Deccan plateau, some of which do not run year-round; (3) short coastal rivers that generally are dry a portion of the year; and (4) the rivers of western Rajasthan. (FAO 2010a; FAO 2011)

Water supply is a serious problem and per capita water availability puts India amongst the most water stressed countries in the world, a situation that is only expected to worsen due to continued growth and climate change. Extraction of groundwater exceeds natural recharge in many areas of the country. Unregulated groundwater-pumping drains utility resources and depletes water tables across the subcontinent. Half of India's groundwater wells are declining, and 21 major cities are expected to run out of groundwater resources by 2020. Furthermore, groundwater use for irrigation has increased considerably over the past two decades. The main reason is the expansion of electrical infrastructure and credit that allows farmers to invest in private groundwater irrigation facilities. This has resulted in diversified, year-round cropping and increased agricultural productivity, but declining groundwater

resources. (USAID 2002; PACS 2005; FAO 2011; Jacoby 2016; World Bank 2018c; NITI Aayog 2018)

Agriculture accounts for 90 percent of water use in India and the country's irrigation infrastructure is the largest in the world. The total area equipped for irrigation is estimated at 70.4 million hectares. However, irrigation and water supply methods in India are generally inefficient. It is estimated that the GOI will need to increase irrigation efficiency to 50 percent in surface water systems and to 72 percent in groundwater systems by 2025 in order to meet domestic food needs. India has made a substantial effort to improve its irrigation infrastructure through large public works such as irrigation system rehabilitation. (FAO 2010a; FAO 2011; NITI Aayog 2018)

As a result of excessive irrigation-use combined with overuse of fertilizers, an estimated one-third of all irrigated land has been degraded through waterlogging and salinization, and 7 million hectares have been abandoned. (GOI 2009b; Kushwaha 2008)

Water quality is also a major problem in India. Seventy percent of water is contaminated, placing India at 120 out of 122 countries in a water quality index referenced by NITI Aayog. Water quality is negatively affected by industrialization, agrichemicals, erosion, soil degradation, domestic pollution, and wetland degradation. This is an especially serious problem on the Damodar and Subarnarekha rivers, which flow through West Bengal, Jharkhand, and Odisha and are horribly polluted by industrial sources. By the time surface water reaches the user, its quality is often severely degraded. The combined intensive use of irrigation and fertilizers has also contributed to groundwater contamination in many parts of the country. (FAO 2010a; GOI 2009b; Kushwaha 2008; NITI Aayog 2018; Kohli 2018)

According to the GOI, poor policy choices are largely to blame for the overuse of water (and fertilizer). Such policies have included: highly subsidizing surface water for irrigation; subsidizing prices for electricity used in tube-well irrigation; and directly subsidizing chemical fertilizers. (GOI 2009b)

## **LEGAL FRAMEWORK**

The Constitution of India grants states the right to control and regulate water, except interstate rivers. The Constitution also mentions water in the context of municipal planning, relations between the GOI and state governments, parliamentary adjudication of disputes involving interstate rivers, taxation of water resources, and India's territorial waters. Also, the Indian Supreme Court has ruled that the right to life, as established in the Constitution, is the basis for a right to water for all people. This human rights overlay, although not yet broadly implemented, has in some cases taken precedence over longstanding common law rules that give preference to individual control of water resources. (GOI 2008b; Cullet 2007)

Although the Constitution grants states exclusive power over most aspects of the water supply, some exceptions exist. First, the Constitution reserves the power of the central government to establish legislation on: (1) the use of interstate rivers; and (2) adjudication of inter-state disputes over water. The Inter-state Water Disputes Act (1956) establishes special tribunals for this purpose. In addition to these Constitutional exceptions to the states' control over water, the national government has carved out additional areas for legislation due to recognized need. The most important of these is national control over water quality and water pollution. The Water (Prevention and Control of Pollution) Act (1974) grants authority to water boards to prevent and control water pollution. National legislation also governs development of major hydroelectric infrastructure, such as dams. (Cullet 2007; FAO 2011)

At the central level, the most comprehensive water management document is the National Water Policy (NWP), adopted in 1987, revised in 2002, and again in 2012. The 2012 NWP recognizes that: large parts

of the country are water stressed; water governance is lacking; groundwater resources are over-exploited; climate change will further impact water issues; access to clean water for drinking remains an issue; water pollution is a growing problem; and better coordination between states is needed. The 2012 NWP calls for: better coordination between various national, state, and local bodies to manage water resources; integrated water resources management according to river basins; the creation of new comprehensive legislation; recognition of the importance of water for ecology; halting of groundwater over-exploitation; the establishment of a Water Regulatory Authority to fix water tariffs; and strengthening community-based water management. It also prioritizes drinking water, followed by water needs to meet food security goals and ecosystem protection. This is in striking contrast to earlier policies that listed hydropower and industry among top water priorities. (FAO 2010a; GOI 2012; Paul 2017)

States control most aspects of water use through legislation. State laws differ. In most states, legislation gives the state control and even direct ownership over surface water. State legislation sometimes conflicts with customary laws and local norms, which often give ownership rights over water resources to individuals who own the land on which the resource is located. (Cullet 2007)

At the local level, groups have developed their own rules to regulate access to water (for irrigation and domestic use) from human-built water sources, such as tanks. These norms are usually unwritten and are often based on caste lines. They run parallel to the formal laws and are often not acknowledged or taken into account in the formation of new legislation. The 2012 NWP recognizes that community-based water management should be institutionalized and strengthened in addition to established Water Users Associations. This is in contrast to earlier NWPs that focused on Water Users Associations exclusively. (Cullet 2007; GOI 2018c)

## TENURE ISSUES

Under the Constitution, no person shall be restricted with regard to the use of wells, tanks, and bathing ghats (steps leading down to a body of water). Courts have also derived a universal right to water from the Constitutionally established right to life. This evolving human rights standard, however, conflicts with state legislation and common law principles granting individuals exclusive use-rights to water. (GOI 2008b; Cullet 2007; Paul 2017)

The GOI controls development and regulation of interstate rivers, and state governments control all other water supplies, including irrigation and canals, drainage and embankments, water storage, and waterpower. (PACS 2005; FAO 2010a)

In India, legislators have not created a uniform system or process for ensuring secure and enforceable water rights. (World Bank 1999; PACS 2005; Cullet 2007)

Rights to use surface and groundwater are unclear, and vary by state:

**Surface water.** States typically grant use-rights to people who own the land lying beneath the water. According to common law principles, surface water belongs to landowners per a riparian rights system (riparian owners share rights to the surface water equally with other riparian owners, in undiminished flow). The rights of bulk users, including Water User Associations, vary by state. (PACS 2005)

**Groundwater.** Neither the central nor state governments have laws clearly defining groundwater rights. Under common law, owners and occupiers of a piece of land have the right to collect and use groundwater. It is customarily accepted that landowners own the wells on their land. Others have no

right to extract water from these wells or restrict use by the owner. Despite the landowner's legal control of all groundwater, in the drier areas of India communities have historically considered the control of wells to be shared by caste or community groups. Social norms have dictated that all have a right to drinking water, irrespective of caste. (PACS 2005; Cullet 2007; Moench 1998; Paul 2017)

Farmers using irrigation systems are increasingly organized into Water Users Associations (WUAs) to enable Participatory Irrigation Management (PIM). States that have adopted legislation to support Participatory Irrigation Management (PIM) are as follows: Andhra Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, and Uttar Pradesh. Punjab, Haryana, and Manipur have drafted PIM bills. (FAO 2011; GOI 2018c)

Women's water rights and involvement in management decisions is not a topic that has been well considered by policymakers and most states have not recognized or reinforced the rights of women to be specifically involved in WUAs. Chhattisgarh, however, is an exception and has taken steps to include women in WUAs. The state passed the Participatory Irrigation Management (PIM) Act in 2006. The Act extends WUA membership to spouses, such that both men and women (not just women with land titled in their names) can participate as full members. The Act also establishes reserved seats for women and also ST and SC members. This Act was passed as part of the Chhattisgarh Irrigation Development Project, which sought to increase farm productivity and enhance rural livelihoods. It also had the goal of increasing women's participation in farm management. Madhya Pradesh also opens membership of WUA especially to women. (Paul; 2017; ADB 2018; ADB 2013)

## GOVERNMENT ADMINISTRATION AND INSTITUTIONS

Water allocation and management is governed mostly by the states, each of which has ministries and agencies responsible for water, rural development, and agriculture, including irrigation. National water resources management under GOI control includes the following agencies:

**The Ministry of Water Resources, River Development & Ganga Rejuvenation** establishes policy guidelines and programs for water resource development. Within the Ministry, the Central Water Commission assists with management of state level water resources and the Central Groundwater Board promotes sustainable groundwater use.

**NITI Aayog** (taking over functions previously assigned to The Planning Commission) is also involved in developing water resources policies.

**The Ministry of Agriculture and Farmers' Welfare** is responsible for irrigation projects.

Other national bodies include: the Indian National Committee of Irrigation and Drainage, which coordinates with the International Commission on Irrigation and Draining and promotes research; and the Central Pollution Control Board in charge of water quality issues. (FAO 2010a; FAO 2011; GOI 2018c; NITI Aayog 2018)

Customary water management practices exist across India. These practices differ by region. The power of customary water authorities has diminished since Independence, as legislation gave control over many water resources to the states. Traditional water-tank infrastructure and canals have degraded, and customary water management knowledge has increasingly been lost. (UNESCO 2006)

## **GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS**

Since adoption of the 2012 National Water Policy, the GOI has drafted several bills that are under discussion and review. A Draft National Water Framework Bill (2016) was created with the goal of establishing a comprehensive national framework for protecting, regulating, and managing water resources and to promote the coordination of states in water resource management. A Model Ground Water Bill (2016) was created to provide a model for states for improved groundwater management. The Bill defines the states as a public trustee of groundwater, which it treats as a common pool resource to be protected, conserved, regulated, and managed. A draft River Basin Management Bill (2018) would amend the 1956 River Boards Act and provide for the establishment of a River Basin Authority for the regulation and development of Inter-State Rivers. It would be national legislation. The other two bills would be state legislation. (GOI 2018c; Economic Times 2016b; GOI 2018d)

To encourage better water management amongst the states, NITI Aayog established a new Composition Water Index to rank states according to water resource management. According to the index, Gujarat is the highest performer, followed closely by Madhya Pradesh and Andhra Pradesh. Sixty percent of states were ranked as low performers. As regards the data that feeds into the index, most states do well on infrastructure-heavy indicators such as irrigation and watershed development. On critical indicators such as groundwater management, sustainable on-farm water use, and rural drinking water, most states have performed poorly. (NITI Aayog 2018)

Centrally sponsored water programs include the Integrated Watershed Management Programme, to improve water management on marginal lands and also land under rain-fed agriculture. This program is a response to an understanding by policymakers that irrigated land under Green Revolution has already reached its productivity limits and that to further increase agricultural productivity, wastelands and rainfed areas must be made more productive. The program is also considered a means of poverty reduction in these areas of the country. (GOI 2013a; Smyle 2014)

GOI's Command Area Development and Water Management (CADWM) Programme, promotes increases in agricultural production through enhanced irrigation management. From 2016-17 onward, 99 irrigation projects have been prioritized, of which 40 are currently active. States with active projects under CADWM are Assam, Bihar, Gujarat, Goa, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Odisha, Punjab, and Rajasthan. (FAO 2011; 2018c)

State governments have provided heavily subsidized water to the agricultural sector. These policies have caused inefficiencies in both water and power generation. (USAID 2002; GOI 2009b)

## **DONOR INTERVENTIONS AND INVESTMENTS**

USAID continues to support the GOI's capacity to deliver water and sanitation services through the Partnership for Water Sanitation and Hygiene (WASH). (USAD 2018a)

Ongoing World Bank projects related to water resources include the following: Karnataka Watershed Development II; Uttarakhand Decentralized Watershed Development II Project; Neeranchal National Watershed Project; Dam Rehabilitation and Improvement Project; Water Sector Improvement Project; West Bengal Accelerated Development of Minor Irrigation; and National Hydrology Project. Urban water supply projects are ongoing in Uttarakhand and Karnataka. Pipeline projects include additional irrigation projects in Andhra Pradesh, Odisha and Himachal Pradesh. Rural Water Supply and Sanitation Projects are ongoing in Kerala, Maharashtra, Punjab, Uttar Pradesh, Bihar, Jharkhand, and Assam. (World Bank 2018a)

The World Bank's National Ganga River Basin Project supports India's National Ganga River Basin Authority in capacity building and policy implementation. (World Bank 2018b)

Finally, the World Bank's work on improving the livability and sustainability of cities includes improvements in water and waste systems. The World Bank has ongoing or pipelined Sustainable Urban Development Projects in Madhya Pradesh, Tamil Nadu, Andhra Pradesh, Telangana, and Jharkhand. (World Bank 2018a)

FAO programmatic priorities include "effective natural resource management, community development and assistance in transboundary cooperation." Work includes improving capacity of institutions to provide extension services on irrigation management, including especially to women. (FAO 2018)

ADB's work in India includes providing technical support to implement the National Water Use Efficiency Improvement Project. It also includes rural irrigation water management support and urban water supply work. (ADB 2017)

### **3. TREES AND FORESTS**

#### **RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION**

While government statistics put forest area in India at 61 million hectares or 21.3 percent of the land area (that is "Recorded Forest Area"), the actual forested area is somewhat less because this figure also includes scrublands and "open forests" which can have as low as 10 percent tree cover. Others estimate that actual forest covers 48 million hectares or 15.43 percent of the country. There are 16 major forest types with the most commonly occurring types being tropical dry deciduous, moist dry deciduous, tropical rain, hill, and montane forests. Planted forests constitute 2.4 million hectares and produce teak, bamboo, acacia, and eucalyptus. (FAO 1997; World Bank 2019; FAO 2010b; GOI 2016b; WRI 2014; MEF 2017)

Forests contribute 1.7 percent to India's GDP. Wood products include processed products and paper. Non-timber forest products such as latex, gums, resins, essential oils, flavors and fragrances, thatching materials, and medicinal plants have the potential to support further economic development. An estimated 60 percent of non-timber forest products are consumed locally. Approximately 400 million people living in and around forests depend on the sale of non-timber forest products for sustenance and supplemental income. Further, 707,000 people are directly employed in this sector. (FAO 2010b; WRI 2014)

Forest degradation, impacting 41 percent of forests, is a serious problem in almost all states in India. Approximately 55 percent of forests are affected by forest fires annually. Other factors contributing to the degradation of forests include increasing population, the conversion of forests to other uses, encroachment by agriculture, grazing, disease, and the collection of fuel wood. According to the World Bank, approximately 78 percent of all forestland is heavily grazed. The rate of deforestation has decreased significantly since the 1970s due in part to the introduction of social forestry, replanting, and conservation values encoded in the National Forest Policy. Nevertheless, the rate of deforestation rose from 0.2 percent between 1990 and 2000 to 0.7 percent between 2000 and 2005 because of fuel removal and forest clearance for mining. The average dropped back to 0.2 percent between 2005 and 2010. (FAO 2010b; World Bank 2006b; GOI 2001a; WRI 2014)

India is the largest consumer of fuel wood in the world. Ninety percent of forest consumption is in small timber and fuel wood. Fuel wood consumption in India is approximately five times higher than that

which forests can sustain. Fuel wood meets 40 percent of India's energy needs. The use of fuel wood is particularly prevalent in rural areas, where 80 percent of people utilize it. In urban areas, 48 percent of people use fuel wood. (FAO 2010b; WRI 2014)

Protected Areas, including national parks, wildlife sanctuaries, and conservation and community reserves for wildlife made up 162,073 square kilometers as of January 2018, amounting to 4.93 percent of total land area. In many of these Protected Areas, access for livelihood purposes is partially or completely restricted in accordance with the Wildlife Protection Act (WLPAct 1972). (Kohli 2018; Aggarwal 2018b)

## LEGAL FRAMEWORK

The Constitution of India provides that the government shall strive to protect the environment, including forests and wildlife. Key central-level forest legislation includes: the Indian Forest Act (1927); the Wildlife Protection Act (1972); the Forest (Conservation) Act (1980); the National Forest Policy (1988, but currently under revision); the Notification Re: Participatory Forest Management (1990); the Revised Guidelines for participatory forestry issued by the Ministry of Environment and Forests in 2000; and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act or the Forest Rights Act (2006). (GOI 2008b; Hanstad et al. 2005; Global Forest Coalition 2010; Kohli 2018)

The colonial Indian Forest Act (1927) is the primary governing forest law in India. Under the Forest Act, the GOI owns India's forests, and the states serve as proprietors of the forestland and its resources. The Forest Act categorizes forestland into forest types, which in turn define the rights and responsibilities of various persons. The Act "reserves" forests for timber value and was created to facilitate the extraction of timber resources. (GOI 2009a; Global Forest Coalition 2010; GOI 2016a)

Although the India Forest Act gave extensive control over forests to the states, a later constitutional amendment transferred authority to the GOI and led to the adoption of the Forest Conservation Act (FCA) (1980, amended in 1988). Under the FCA, states may not divert or otherwise reclassify forestland without GOI approval. National guidelines issued in 1992 set forth the conditions under which forestland may be diverted to non-forest use. The most important condition is that the lost forest area must be replaced with forest area elsewhere. Adoption of the FCA considerably slowed diversion of forestland for other uses. However, the FCA eliminated or diluted community rights over community lands through the process of recording forest rights. The beneficiary of transferred forest rights was generally the GOI's forest management bureaucracy, whose powers to control land increased. Reclassification of large areas of forestlands deprived traditional forest dwellers of their rights to use and occupy the forested areas, without any meaningful attempt to clarify those rights. (GOI 2006; Sarin 2005; Kohli 2018; GOI 2016a)

In 1988, the GOI adopted a National Forest Policy. This policy involves local communities in protection and development of the forest. It introduced a Joint Forest Management (JFM) mechanism, adopted by most states, with the goal of balancing forest preservation and rehabilitation needs with the demands for fuel wood and small timber requirements of the local (often ST) communities. Despite some progress under the JFM system, most forestry resources are still managed by the state rather than by local communities. (FAO 1997; NFAP 2001; Hanstad et al. 2005; World Bank 2006b)

In 2018, the Ministry for Environment, Forest and Climate Change announced a new draft Forest Policy. The draft policy's stated objectives are to safeguard ecological and livelihood security of people based on the sustainable management of forests. It sets a goal of having one-third of India's land under forest and tree cover. In hilly and mountainous regions, the goal is two-thirds coverage. It also proposes two new national-level bodies, a National Community Forest Management (CFM) Mission, and a National Board

of Forestry (NBF), and calls for the creation of state forestry boards. The new draft Forest Policy has been criticized for undermining previous work to transfer forest management and protection to local communities. (Aggarwal 2018a; Bhaya 2018)

The GOI enacted the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (2006) (“Forest Rights Act”) to recognize the traditional rights of the Scheduled Tribes and other traditional forest dwellers. The Act substantially shifted legal authority over forest resources from the GOI to local ST communities, and states that forest rights vest with traditional forest-dwelling communities. The Forest Rights Act provides a mechanism by which ST members can obtain secure title to land their families have occupied and farmed for three generations. The Act also provides for recognition of common property rights over forestlands and empowers gram sabhas (local village assemblies) to protect, manage, and conserve community forest resources. (GOI 2016a; NRMCM 2017; Kohli 2018)

The law’s mandate to decentralize authority over forest resources to the community level has proven controversial, with sharp divided debate between the National Ministry of Tribal Affairs and the Ministry of Environment, Forests and Climate Change over the repercussions of the Act on preservation of forest resources. The National Ministry of Tribal Affairs continues to express frustration that state Forest Departments continue to resist the transfer of rights to local communities under the Forest Rights Act and reject applications inappropriately. (GOI 2010b; Bhaya 2018; Oxfam 2015; Kukreti 2018)

To date, most states have not effectively or extensively implemented the provisions of the Forest Rights Act. (World Bank 2008; GOI 2009a; Acharya 2010; Sethi 2010; Global Forest Coalition 2010; NFFPFW n.d.; Bhaya 2018; Oxfam 2015)

## TENURE ISSUES

While the national government owns most forestry resources in India, states have significant management control over forests, and recent legislation (the 2006 Forest Rights Act) vested forest rights on ancestral lands with traditional forest-dwelling communities. Forests under the ownership and control of the state are known as Recorded Forests. Recorded Forests can be separated into three categories: (1) Reserved Forests (which fall under the jurisdiction of state Forest Departments, with approvals for some actions required from the central government); (2) Protected Forests (which fall under the jurisdiction of the national and state forest departments and include national parks and wildlife sanctuaries); and (3) Unclassed Forest (which fall under the jurisdiction of communities and individuals, and include forests that are neither reserved nor protected). (NFAP 2001; FAO 1997; Global Forest Coalition 2010)

State governments have the power to declare as Reserve Forest any government-owned forestland and wasteland, and any property over which the government has proprietary rights. The process for doing so entails notifying the public and considering claims to land. Thereafter, all lands included in the proposed forest vest with the state. Once the state issues a notification that certain property is Reserved Forest, no rights can be acquired in or over the land, nor can the forest be used except as agreed to by the government. (Hanstad et al. 2005; GOI 2009a)

The state can declare any government-owned forestland and wasteland over which the government has proprietary rights (and which is not already a Reserve Forest) to be Protected Forest. Generally, all forest use is permitted in Protected Forests unless expressly prohibited. The government can make rules regarding the cutting, sawing, conversion, and removal of trees and use of other flora and fauna found in the forest. (Hanstad et al. 2005; GOI 2009a)

Between 1951 and 1988, the net area of forestland under the control of the Forest Department increased by 26 million hectares. Most of this forestland was classified as Reserve Forest. In some cases, the process of reserving forestland was accompanied by the identification of forest users and recording of customary rights. In other cases, the reservation of forestland resulted in the eviction of communities from the forestland, disproportionately impacting ST members. A substantial portion of forest classified as Reserve Forest has been so classified without completion of the required survey and settlement procedures. (Hanstad et al. 2005; GOI 2009a; World Bank 2015; GOI 2016a)

State policies have had a significant impact on women's rights to forest resources, due to changes in forest management, loss of forest resources, and changes in livelihoods. Because women depend highly on forest resources for their family's livelihood and their social status, they have become more economically, socially and politically marginalized as their traditional rights to the forest have diminished. (World Rainforest Movement 2005)

The Forest Rights Act sought to solve the historic divestment of ST members (and other long-term forest dwellers—those whose families lived in the forests for at least three generations before 2005) of their historic rights to forest resources by recognizing individual and community forest rights. Individual rights are heritable but not transferrable. Implementation of the Forest Rights Act has been criticized. As of May 2015, the government had received 4.4 million claims, but only 1.7 million had resulted in titles. While the Forest Rights Act allows recognition of Community Forest Rights, most rights recognized thus far have been individual rights. There are great differences between states in implementation with Bihar, Jharkhand, Himachal Pradesh, and West Bengal being considered to be especially lagging in implementation. States with the best implementation are considered to be Maharashtra, Odisha, Kerala, and Gujarat. (Oxfam 2015; IPT 2017; World Bank 2015)

## **GOVERNMENT ADMINISTRATION AND INSTITUTIONS**

Within the constraints of national legislation, forests are managed in each state by a state Forest Department. These state departments act as custodians for the nationally owned forest resource. Each state Forest Department is led by a Chief Conservator of Forest. (GOI 2006; GOI 2009b; Kohli 2018; WRI 2014)

At the national level, within the Ministry of Environment, Forests and Climate Change are the following key divisions: the Indian Forest Service, a multi-state service which manages Reserved and Protected Forests; the Forests Conservation Division administers the Forest Conservation Act and processes all proposals to divert forest lands to non-forest purposes; a Forest Policy Division acts as a think tank and drafts the National Forest Policy; and the Wildlife Division which promulgates policy and knowledge management related for the country's Protected Area network. Within states, state Forest Departments manage Reserved and Protected Forests and state Revenue Departments manage the Civil Forests (also known as Revenue Department Forests). The National Ministry of Tribal Affairs and the Ministry of Environment, Forests and Climate Change are charged with implementing the Forest Rights Act (2006). (Hanstad et al. 2005; Sethi 2010; MOEF n.d.; WRI 2014)

The 2006 Forest Rights Act increased the authority of local communities over forest resources, and the GOI continues efforts to decentralize forest resource management through regulations and directives to the states. For example, in October 2010, the GOI's Union Environmental Minister directed state governments to move the Joint Forest Management Committees (JFMCs, the Forest Department's smallest, most grass-roots level unit) directly under control of the panchayat raj (locally elected village council). While the JFMCs technically represented diverse stakeholders prior to this directive, they were

actually headed by Forest Department officials. Now the JFMCs will be organs of the gram sabha (village general assembly), acting as standing committees for forest resource management. Despite these positive moves, observers have not seen a sustained shift of forestry management to the local level and many of these institutions remain inactive or dominated by the Forest Department. (The Hindu 2010; Acharya 2010; Kohli 2018; World Bank 2015)

## **GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS**

The GOI is an active participant in the United Nations' Reducing Emissions from Deforestation and Forest Degradation (REDD+) program and recently adopted a country implementation strategy to monitor forests and actively increase and improve forest cover, which will allow the country to meet its Nationally Determined Contribution under the Paris Agreement on Climate Change. Advancing the REDD+ agenda opens important questions about control of forest resources per the Forest Rights Act and other attempts to decentralize forestry management. Some observers have expressed concerns that REDD+ will further compromise local communities' rights to control the forests. (MOEF 2018; ICFRE 2007; NFFPFW n.d)

The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) was established in 2009 and is responsible for monitoring and providing technical assistance on compensatory afforestation activities. Its purpose is to promote reforestation as a means of compensating for forest lands diverted to non-forest use. The CAMPA fund was created based on an order of the Supreme Court of India and is funded through collection by state CAMPAs of funds from forest user agencies. (WRI 2014)

The National Mission for a Green India is a 10-year program launched in 2014 to improve degraded forests and bring non-forest areas under forest cover. (WRI 2014)

The National Afforestation Program supports the devolution of forest protection to Joint Forest Management Committees at the village level. It also focuses on improving livelihoods of communities reliant on forests. (WRI 2014)

The Ministry of Environment, Forests and Climate Change, through the National Board for Wildlife, is currently considering dramatically increasing the number of Protected Areas in India in order to meet a target of 17 percent of land area. (Aggarwal 2018b)

## **DONOR INTERVENTIONS AND INVESTMENTS**

The World Bank funds the Improving Rural Livelihoods through Carbon Sequestration Project, which encourages resource-poor farmers to raise tree plantations of carbon-rich tree varieties. This is a pilot initiative aimed at improving rural livelihoods through sustainable forestry. The project runs from 2007 to 2019. (World Bank 2007b; World Bank 2018b)

The World Bank is also funding the Himachal Pradesh Watershed Management Project. The goal of the project is to sequester greenhouse gases by expanding forestry plantations on degraded lands held by small farmers. The project is a subpart of the Mid-Himalayan Watershed Development Project. As a result, the project is jointly implemented by the Mid-Himalayan Watershed Development Project, the Forest Department, and local gram panchayats. (World Bank 2007a; World Bank 2018b)

Other active World Bank projects that touch on forestry issues include: the Meghalaya Community Landscapes Management Project (strengthening local resource management); India Ecosystems Service Improvement Project (to improve forest quality, land management, and non-timber forest products); Jharkhand Opportunities for Harnessing Rural Growth Project (including supporting increased

livelihoods through non-timber forest products); and National Rural Livelihoods Project (including income from forest products). (World Bank 2018b)

FAO is working on sustainable mountain agriculture (with a focus on women's economic empowerment). (FAO 2018)

USAID has several forestry programs. First, through Forest-PLUS (Partnership for Land Use Science) USAID is working with the Ministry for Environment, Forests and Climate Change to pilot forest management tools in the states of Karnataka, Madhya Pradesh, Himachal Pradesh, and Sikkim. Forest-PLUS is also supporting India's REDD+ efforts. Forest-PLUS is working with the Forest Survey of India to develop a national Forest Data Management System. The program also supports ecosystem health through education on improved management as well as partnering with India's corporate sector to finance reforestation. Second, Innovations for Forest Resources Management (InFORM) aims to reduce forest degradation through improved livelihoods for forest-dependent communities. InFORM programs are on-going in Odisha, Karnataka, and West Bengal. InFORM also includes policy work to improve the governance framework for participatory forest management. (USAID 2018c)

## 4. MINERALS

### RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

India's mineral resources include barite, bauxite, chromite, coal, iron, mica sheet, talc, pyrophyllite, aluminum, crude steel, and manganese, the deposits or production of which rank among the ten largest in the world. Overall, India is a major mineral producer. Mining and quarrying accounted for 2.7 percent of GDP in 2015. (USGS 2018; Hill 2010; GOI 2013a)

The mining sector employs over 500,000 people directly, with coal mining accounting for 70 percent of India's employment in the mining sector. The largest coal-producing company in the world is the state-owned Coal India Limited. Other large state-owned companies in India are active in steel, base metals and aluminum mining and production. (IIED 2002)

Land used for the mining sector (excluding atomic, petroleum, and minor minerals like sand and clay) amounts to 0.17 percent of land area. Most mining operations in India (outside of the coal industry) are small-scale. Fifty-seven percent of mines occupy 10 or fewer hectares, and an additional 23 percent occupy between 10 and 50 hectares. The government and mining industry believe that the mining sector has substantial room for economic expansion. (Hill 2010; GOI 2013a)

Expansion of mining operations in India can be a source of conflict due to compulsory land acquisition as well as environmental concerns, especially over water resources used and polluted for mining operations. For example, coal mining in Chhattisgarh has been a source of great conflict, with mining in the Hasdeo Arand area – spanning 17,000 hectares – being especially disputed. Much of this area has been declared closed to mining due to environmental considerations, but extraction companies have continued to submit proposals to clear forest areas for mining with some gaining approval from the Ministry of Environment, Forests and Climate Change. Local gram sabhas have strongly opposed mining in Hasdeo Arand. Many local people do not view the grants of mining rights as transparent. These actions have provided political fuel for the Naxalites, armed Maoist insurgents. Many other such conflicts over mining are simmering in India due to a lack of transparency in land or mining right acquisitions and environmental concerns related to water use and pollution. (Ramesh 2006; Gupta 2018; Upadhyaya 2015)

The mining sector has caused widespread environmental problems in India, including groundwater pollution, loss of agricultural and forestland, and damage caused by abandoned mines. Furthermore, mining activities disproportionately impact ST communities in terms of displacement and damage to landscapes and livelihoods. States and areas within states richest in mineral resources are also among India's poorest areas; mining wealth generated does not improve the livelihoods of local residents. (Metha 2002; Upadhyaya 2015; GOI 2016a; Kohli 2018)

## LEGAL FRAMEWORK

Minerals (other than natural gas, petroleum and atomic minerals) are managed pursuant to the Mines and Minerals (Regulation and Development) Act (1957), which was amended in 2015. The 2015 amendment sought to bring more transparency into the allocation of mining licenses by auction. The legal changes are controversial, with critics saying they do not go far enough in granting local communities a say in mining operations that impact them. The states have their own rules for concessions of minor minerals (sand, stones, gravel, clay, etc.). Development of minerals is also governed by the Mineral Conservation and Development Rules (1988). (GOI National Mineral Policy 1993; GOI 2016a; Upadhyaya 2015; USGS 2015)

In 2015 the government passed the Coal Mines (Special Provisions) Act, which identified and closed 204 coal mines whose mining rights were not transparently awarded. This Act was passed as a result of the Supreme Court ruling in the Colgate case, which found "all coal mine blocks allocated through the government steering processes since 1993 as illegal and arbitrary." (USGS 2015; Kohli 2018)

The National Mineral Policy (1993) opened mineral exploration to the private sector and to foreign investment. This policy also allowed foreign participation in mining joint ventures, generally limiting foreign equity participation to 50 percent. In 2006, the GOI removed limits on foreign participation in diamond and precious stone mining ventures, allowing 100 percent foreign ownership. (GOI 2006; GOI 2008a; Upadhyaya 2015)

The GOI approved a new National Mineral Policy in 2008. This policy seeks to: reduce procedural delays that limit investment and technology flow in the mining sector; develop a sustainable, optimum utilization of the country's mineral resources; balance development with the goal of improving the lives of people living in mining areas (located primarily in the less developed regions of the country, where ST communities reside); and deter environmental consequences of mining through the adoption of legal safeguards. Despite these stated aims, in 2016 the GOI itself found that "the entire structure of the mining legislation does not require that the affected communities be informed, leave [sic] alone consulted, before such [mining] permits are granted." In 2018 the Ministry of Mines issued a new draft National Mineral Policy as required by directive of the Supreme Court. (GOI 2008a; Upadhyaya 2015; GOI 2016a; MOM 2018)

## TENURE ISSUES

The state governments own minerals located within their borders and are largely responsible for granting concessions for mineral exploration. State owns all underground mineral resources regardless of surface ownership or easements. Minerals located offshore are the property of the central government. (GOI 2008a; GOI 2013a; GOI 2016a)

India faces substantial problems related to land acquisition for mining and stemming from the absence of a clear rehabilitation and resettlement policy for people affected by land acquisition and related mining operations. Mining companies rarely consult with local communities. The failure to satisfy local needs

and concerns has led to confrontations, tensions and conflict, sometimes in the form of campaigns by civil society organizations and people's action groups that allege unjust mining practices. Other largely unaddressed issues include displacement, human rights violations, environmental degradation, and health hazards. (IIED 2002; Kohli 2018)

Between 2005 and 2016, 731,787 hectares of land was diverted for mines; out of this, 177,206 hectares was forest land. Total mining projects approved during this window were 2,523. States with the largest amount of land use change due to mining were Chhattisgarh, Maharashtra, Madhya Pradesh, Jharkhand, Odisha, and Rajasthan. (Kohli 2018)

## **GOVERNMENT ADMINISTRATION AND INSTITUTIONS**

At the central level, mineral exploration, excluding natural gas, petroleum and atomic materials, is under the control of the Ministry of Mines and the Bureau of Mines. Each state has its own body responsible for granting mineral concessions. Any proposed mining operations that will impact forests must receive approval from the Ministry of Environment, Forest and Climate Change. (GOI 2008a)

The Geological Survey of India is principally responsible for geological mapping and mineral resources assessment. The Department of Ocean Development oversees seabed exploration, exploitation, mining and processing. Other agencies and government corporations involved in these tasks include the Mineral Exploration Corporation, the Directorates of Mining and Geology of the various state governments, and various central and state public sector organizations. (GOI 1993)

## **GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS**

As described above on the sub-section on Legal Framework, the government has amended mining legislation in response to criticism of the mining sector regarding environmental impact, lack of transparency, and negative impacts on local communities. The Ministry of Mines, as directed by the Supreme Court, is currently reviewing the National Mineral Policy and recently completed a draft for public consultation. Policy-wise, the topic remains contentious. (MOM 2018)

The GOI's current Three-Year Action Plan considers the energy sector as a catalyst for economic growth and development and as such announced an initiative to increase domestic coal production. By 2019 the GOI's goal was to have explored at least 25 percent of the unexplored 5,100 square kilometers of coal bearing areas. The GOI also seeks to increase private sector involvement in coal production. (NITI Aayog 2017)

GOI's "Make in India" program, launched in 2014, calls for policy reforms to promote industry. In response to this program, in 2015 the Ministry of Mines established a Department of Skill Development and Vocation Education to improve technical capabilities in the mining and manufacturing sectors. (USGS 2018)

## **DONOR INTERVENTIONS AND INVESTMENTS**

Major donors are not actively involved in mining projects, but both the World Bank and USAID are undertaking clean energy and energy efficiency work. (World Bank 2018b; USAID 2018d)

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