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# ACHIEVING GENDER EQUALITY IN ACCESS TO LAND AND ASSETS: THE TRANSFORMATIVE POTENTIAL OF GROUP FARMING

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**Bina Agarwal**, Professor of Development Economics and Environment, The University of Manchester, UK, and former Director, Institute of Economic Growth, Delhi

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# Abstract



“ One Earth. One Family. One Future” – India’s aspirational theme for the G20 Dialogues aims at transformative change. A key aspect of such change is achieving socio-economic equality for women. This Policy Brief highlights

how enhancing women’s access to and control over land and other productive assets can prove foundational globally, for achieving gender equality on multiple fronts, and presents group farming as a transformative pathway forward.



# The Challenge



# 1



**A**ttaining gender equality in access to productive assets, especially land, can prove key to achieving G20 aspirations and critical targets in many Sustainable Development Goals (SDGs). Some SDGs are linked directly to this access—such as SDGs 5, 1, 2 and 10 (gender equality, poverty, hunger, and inequality, respectively). Other SDGs are linked indirectly, such as those relating to decent work, health, and education.

Substantial evidence from across the globe demonstrates that women's ownership of productive assets, especially land, greatly enhances their economic and social well-being, reduces their risk of poverty and physical insecurity, and improves child survival, health and education. It can also increase farm productivity and food security. Owning productive assets, therefore, can enhance welfare, efficiency and empowerment for women and their families.

Outcomes in child nutrition, health, and educational attainment, for example, are found to be significantly better if the mother owns assets.<sup>a</sup> Owning land also greatly reduces women's likelihood of being poor (Meinzen-Dick et al., 2017), or experiencing spousal violence (Agarwal and Panda, 2007). Moreover, assessments by the Food and Agriculture Organization (FAO, 2011) show that if women farmers in developing countries had the same access as men to productive resources, especially land, they could increase their farm yields by 20 to 30 percent and raise the country's total agricultural output by 2.5 to 4 percent. These efficiency gains matter greatly, given the high proportion of women in agriculture in the Global South. Indeed, FAO's figures<sup>b</sup> show that in many countries, some 45-50 percent of the agricultural workforce is female, as more men move to non-farm jobs leaving an increasing proportion of women as *de-facto* farm managers, a phenomenon termed as the "feminisation" of agriculture (Agarwal, 2014; Lastarria-

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a See, e.g., Allendorf (2007), Deere and de Leon (2003), Deere and Doss (2006), Menon, Rodgers, and Nguyen (2014), Misra and Sam (2016), Quisumbing and Maluccio (2003), Strauss and Beelge (1996), Sraboni et al. (2014), and Tomas (1990).

b See relevant section in <https://www.fao.org/statistics/en/>.



Cornhiel, 2006). Indeed, productive assets and female employment options are closely linked.

Yet, a vast gender gap persists in land and asset ownership across many G20 countries, especially but not only among developing ones. This can be attributed largely to legal and social factors discussed further in this brief. In addition, globally, 84 percent of farmers across 111 countries cultivate under 2 hectares (FAO, 2014:12),<sup>c</sup> in fragmented plots, making most of them economically unviable and environmentally vulnerable. Tackling the gender gap in land access and making smallholder agriculture sustainable will require innovative policy interventions that look beyond family farms and individual ownership of land.

### Gender Gap in Land Ownership

Gender inequality in land ownership is found globally, but it is especially notable in the developing world. Less than one-third of landowners in South

Asia, Sub-Saharan Africa and Latin America are women (see Table 1). The figures are as low as 14 percent in India, and 11 percent in Brazil.

To assess the full extent of inequality, however, a range of indicators are needed, the computation of which is restricted by a lack of detailed and comprehensive data.<sup>d</sup> Data scarcity also makes it difficult to monitor the progress of SDGs over time.

Nevertheless, one study on India, using data for 2014, was able to compute several indicators of gender inequality in land owned (Agarwal et al, 2021).<sup>e</sup> The gaps were found to be large by all measures (see Figure 1). Barely 16 percent of households across nine states had any female landowners, and just 8.4 percent of all women aged  $\geq 15$  years owned any land. Overall, women constituted 14 percent of landowners, owning 11 percent of farm land. Similar assessments using several indicators are needed for more G20 countries.

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c Farms are becoming smaller still in most countries (Lowder, Skoe, and Raney 2016).

d The FAO, which collates gender-disaggregated data on land, lists only 20 countries reporting land ownership by gender, of which 13 are in Sub-Saharan Africa (<http://www.fao.org/gender-landrights-database/en/>). In India, neither the Agricultural Censuses nor the National Sample Surveys provide gender-disaggregated estimates on land owned.

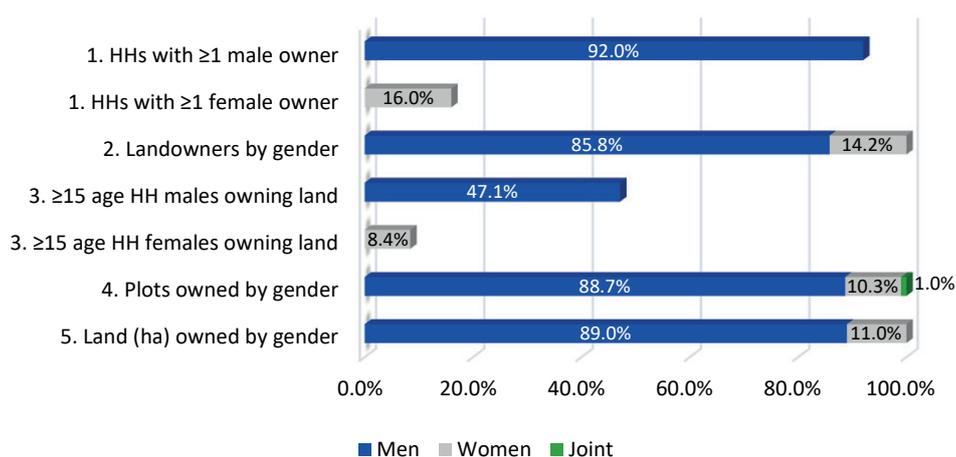
e This is the only study for any G20 country that covers several indicators, although there are a few similar computations for non-G20 countries (Kieren et al. 2015).

**Table 1: Gender Gaps in Rural Land Ownership in Developing Economies**

Country/Region	Indicators based on available data
<i>South Asia</i>	
% women who are landowners	
Bangladesh (2011-12) <sup>1</sup>	8.5
India (2014) <sup>2</sup>	8.4
Nepal (2011) <sup>1</sup>	10.4
Pakistan (2012-13) <sup>1</sup>	4.0
Sri Lanka (2006) <sup>1</sup>	30.4
% landowners who are women	
Bangladesh (2011-12) <sup>1</sup>	22.7
India (2014) <sup>2</sup>	14.2
<i>Sub-Saharan Africa:</i> (Average for 9 countries: 2002-08) <sup>3</sup>	22.2
<i>Latin America:</i>	
Range for 3 countries: (1995-01) <sup>4</sup>	12.7 – 27.0
Brazil (2000) <sup>4</sup>	11.0
Mexico (2002)	22.4

Sources: <sup>1</sup> Kieren et al. (2015: 124, 127, 130); <sup>2</sup> Agarwal, Anthwal and Mahesh (2021); <sup>3</sup> Doss et al. (2015: 418); <sup>4</sup> Deere and Leon (2003:928): the three countries do not include Brazil and Mexico (given separately as G20 countries).

**Figure 1: Gender Inequality in Land Ownership in India, multiple indicators 2014**



Notes: HHs = households. Ha=hectare. Joint plots are those co-owned by both women and men.

Source: Agarwal, Anthwal and Mahesh (2021). Calculated by the authors from data collected by the International Crops Research Institute for the Semi-Arid Tropics, Hyderabad.



## Factors Underlying Gender Gaps

Several factors underlie the noted gender gaps in landed assets. There are three main sources of land – the family, the government and the market. Of these, the family is the most important, since most agricultural land tends to be privately owned (in India, some 86 percent is in private hands: Agarwal, 1994:24). Women's access to family land, however, is severely limited by unequal inheritance laws, inadequate legal implementation even when the laws are equal, and strong family resistance to endowing daughters with immovable property.

In many countries, inheritance laws remain highly gender unequal, be they codified or customary (World Bank, 2023). Moreover, even where laws are largely gender equal, as in India and Brazil, implementation is poor. To begin with, families seek to keep land within the extended household. In cultures where social norms dictate that women must marry strangers in distant villages (as in northern India), parents resist giving them land on the grounds that it will go to another family when the daughter gets married (Agarwal, 1994).

The resistance is somewhat less (but still present) where in-village marriages with extended kin are allowed.

Many women also lack full awareness of their rights. Here we need public awareness campaigns and legal aid and guidance for women who wish to stake their claims. This has produced positive results when tried in India, such as by the Bhoomi Nyaya Sahaya Kendram programme undertaken in Andhra Pradesh over 2011-2014. The programme's para-legal assistance helped many poor women secure land rights (Reddy, 2020). Equally necessary is the gender-sensitisation of government officials who register inheritance shares or who digitise land records, since they too often carry male-biased views (Agarwal, 1994). Moreover, women themselves usually hesitate to file claims for fear of eroding family relationships. Overall, therefore, women's ability to access land via their families is seriously constrained.

Access via the government is also restricted, since governments often have limited agricultural land under their command for distribution. Yet, when land does get distributed, say for poverty alleviation or compensation for



displacement, policymakers need to prioritise women.

The most effective way forward, however, is one that has received limited attention—namely, supporting women to access land via the market and linking it to institutional reform. On their own, women rarely have the financial means to purchase or lease land, and

face constraints in self-cultivating what they own (Agarwal and Mahesh, 2023). Moreover, most farms are small and economically non-viable. It is thus imperative to have a policy approach that can address *both* concerns: gender inequality in land access, and small farm size. Here an innovative *group approach*, especially group farming, can provide a solution.



# **Innovative Policy Shift: Group Farming**

# **2**



**T**o begin with, governments in developing economies can subsidise land purchase by poor women organised in small groups, such as Self Help Groups (SHGs). This was tried in India with some success in the state of Andhra Pradesh in the late 1980s. The state government's loan-cum-grant scheme enabled women with few financial resources to purchase land in groups of ten, and register equal-sized plots individually (Agarwal, 2003).

The productive use of such land, however, needs an institutional innovation. A creative solution lies in

group farming. Cooperation in farming can be undertaken at different levels. It can range from single purpose cooperation (e.g. marketing together) at the first level, to medium purpose cooperation (pooling labour or jointly buying capital intensive machinery), and further to fully integrated cooperation (pooling land, labour and capital and sharing costs and benefits). This last level would constitute group farming.

### **Potential benefits**

Group farming could bring a wide range of advantages (see Box 1).

#### **Box 1: Potential Advantages of Group Farming**

- Greater access to land
- Economies of scale
- Saving on hired labour
- Better access to credit, inputs, and technical information
- Greater diversity of skills and leadership talent
- Enhanced ability to experiment with riskier, higher-value crops with higher pay-offs
- Risk-sharing among a larger number of individuals
- Better delivery on contracts
- Greater bargaining power with governments, markets
- Easier adaptation to climate change
- Greater physical mobility and public interaction for women, and more autonomy in management

*Source:* Author's analysis



## Evidence of observed benefits from South India

India offers important examples of successful group farming, especially by all-women groups, and some also by mixed-gender groups. Robust empirical evidence from several states shows that group farms tend to be more productive and profitable than individual family farms (Agarwal, 1998; Sugden et al., 2021).

The state of Kerala in south India, has been particularly successful, and today it has over 68,000 group farms involving some 300,000 women. In the 2000s, under its State Poverty Eradication Mission, Kudumbashree, the government of Kerala promoted group farming. Women initially join neighbourhood groups for savings-and-credit and subsequently take up farming. They pool their resources to lease in land which they cultivate jointly, with an equitable sharing of labour and capital as well as of financial and other costs and benefits. They receive a startup grant and technical training, and can access subsidised credit from India's National Bank for Agriculture and Rural Development (NABARD).

To compare the economic performance of group and individual farms, this

author conducted empirical research on a sample of 250 women's group farms and individual family farms (95 percent of which were male-managed). Over 2012-13, weekly data were collected for all inputs and outputs, for all crops and plots, for an entire year, as well as qualitative data via focus group discussions. The results of this analysis are published in several peer-reviewed journals (Agarwal, 2018; 2020a; 2020b).

The average group size was six. Group members were disadvantaged economically, but were socially heterogeneous by caste and religion. Contrary to established collective action theory which emphasises that homogeneity is more conducive to cooperation, social heterogeneity was found to be advantageous in expanding the group's social capital and hence land access. Groups cultivated one hectare on average, relative to the 0.35 ha cultivated on average by individual farms. The women's groups leased in land while individual farmers typically owned the land they cultivated. Leasing takes time and has high transaction costs. Their startup grant and training, notwithstanding, all-women groups thus continued to face an unequal playing field relative to landowning male farmers.

**Table 2: Group vs. Individual Farms in Kerala: Productivity and Net Returns: 2012-13**

Indicators (mean values)	Group farms (N=69)	Individual farms (N=181)	t-values of difference in means
Annual value of output (Rs/ha)	179,183.7	101,156.2	3.19***
Banana yields (Rs/ha)	413,734.2	258,064.1	1.72*
Annual net returns (Rs/farm)	1,21,048.5	23,578.3	4.20***
Annual net returns (Rs/Ha)	1,16,397.6	69,903.6	2.19**

Note: Rs = Indian Rupees; ha = hectare. Significance: \*\*\*1%, \*\*5%, \*10%

Source: Agarwal (2018)

Despite this inequality, the annual value of output per hectare of the all-women group farms was found to be 1.8 times that of individual farms (see Table 2). Net returns (annual value of output minus all paid out costs) in the group farms were five times more per farm and 1.6 times per hectare relative to the individual farms. The groups did especially well in niche bananas, cultivated on contract. These economic advantages of group over individual farming were found to be strong even after controlling for input use via regression analysis (Agarwal, 2018). The groups used organic inputs and agroecological methods. Some groups reaped enough profits to buy land collectively.

Farming in groups has enhanced women farmers' capabilities as well. As

managers, they acquired new technical skills, became familiar with financial and administrative bodies, and learnt to negotiate in multiple markets. They also reported gaining improved social status and greater respect from their families and communities. Many stood for village council elections and won (Agarwal, 2020a).

Notably too, group farms in Kerala did much better than individual family farms during the 2020 national lockdown under Covid-19, in terms of economic survival and food security. Of the 30,000 group farms harvesting under national lockdown, 87 percent survived economically (Kudumbashree, 2020), while large numbers of individual farmers lost out due to labour shortage and an inability to sell their produce.



## Evidence of observed benefits from East and West India

Group farming is also found in east India (Bihar and north Bengal) and west India (Gujarat), albeit on a smaller scale. The east India programme, launched in 2015 by the International Water Management Institute, includes all-female, all-male, and mixed-gender groups. Some pool owned land, others lease in land. Individual farmers consolidated their contiguous plots, enabling efficient use of irrigation machinery; a timely completion of tasks; cost saving on inputs, hired labour and transportation; and higher output. Wheat and rice yields rose in all cases, compared to yields obtained when the farmers were working individually (Sugden et al., 2021).

As a group, those leasing in land could also negotiate lower rents. Moreover, some youth groups have taken up group farming instead of migrating to cities for work (Sugden et al., 2001). As with Kerala, the farmers' collectives in east and west India reported being more food-secure during the COVID-19 lockdown than if they had farmed individually (Agarwal, 2021).

The diverse contexts of these successful cases in India point to the robustness of the model. Moreover, all-women groups are found to be more cooperative and less conflict ridden.

## Group farming in Europe

Europe too has group farms, especially in France, Norway and Romania (Agarwal and Dorin, 2018; Agarwal, Dobay and Sabates-Wheeler, 2021). In France today, some 91,000 farms, constituting 21 percent of all farms in the country, are group farms called GAECs (*Groupement Agricole d'Exploitation en Commun*) (GAEC & Societies, 2021). Unlike India, group farming in Europe is largely male-managed and most common in livestock rearing, which is much more labour-intensive than crop cultivation and can benefit most from cooperation (see Box 2).

## Principles for Successful Group Farming

To succeed, group farming would need to be based on specified design principles. Existing models of success suggest that six principles are of particular importance (see Box 3).

## **Box 2: Group Farms in India and Europe**

### **INDIA: active and growing**

- Predominantly women-managed, all-women groups, some mixed-gender groups
- Comprising individuals, not families
- Small-sized plots
- Crop cultivation (typically)

### **EUROPE (France, Norway): active, growing in France**

- Predominantly male-managed
- All-male or mixed-gender groups
- Comprising individuals, typically family members, but some groups include unrelated individuals
- Medium-sized plots
- Animal breeding (typically)

*Source: Author's analysis*

## **Box 3: Six Principles for Successful Group Farming**

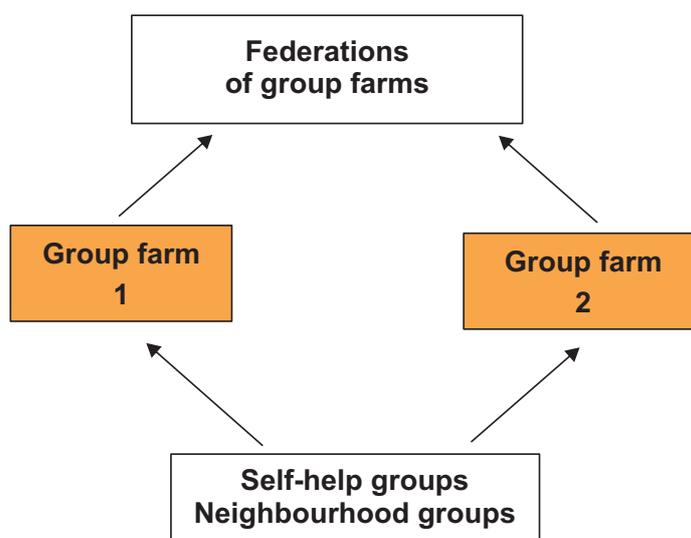
1. Voluntarily constituted
2. Size: small number of members
3. Homogeneity: economically homogenous, socially heterogeneous
4. Decision-making: participative
5. Checks on free-riding: mechanisms to prevent absenteeism
6. Distribution: fair and transparent sharing of costs and benefits

*Source: Author's analysis*

Upscaling group farms by forming a federated structure can bring further gains, by creating an institutional spine that facilitates mutual support between farms and enhances their bargaining

power in markets. Figure 2 provides a schematic representation of such a structure, built with democratically selected members representing their groups.

**Figure 2: Scaling up: Federated Structures**



*Source: Author's analysis*

# The G20's Role

# 3



**A**s noted above, some G20 countries such as India and France already have group farming. These could serve as models for other countries. The Indian examples are especially relevant for regions characterised by small farms and high gender inequality in land ownership, and France for regions with larger farms.

Specifically, the Indian models could be adapted not only for South Asia, Sub-Saharan Africa and parts of Latin America, but also for parts of the European Union (EU) where 43 percent of all farms are under 2 ha, concentrated especially in Romania, Poland, Italy, Spain and Greece.<sup>f</sup> Joint cultivation in these countries could bring efficiency gains, although they would need to be more gender inclusive. More gender balance is also needed in the French

model itself, and in G20 countries that adapt the French model.

Overall, group farming has the potential for transforming agriculture globally. It can provide a market avenue for women to acquire land and cultivate it effectively, thus reducing gender gaps in land access for cultivation, until the gender gap in ownership is bridged. For women (and men) who already own land but lease it out due to inadequate family labour, it would provide a pathway to self-cultivate profitably. Moreover, by working in groups, women farmers can overcome social norms that restrict their mobility; and both female and male farmers can gain new skills, get better access to subsidised credit, buy inputs cost-effectively, obtain contracts for high-value crops, and get remunerative prices for their produce.

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<sup>f</sup> See Eurostat (online data code: ef\_m\_farmleg)



# **Recommendations to the G20**



# **4**



**T**his Policy Brief makes two sets of recommendations for the G20 countries.

### **1. Enhancing women's access to land and assets.**

- Gender-disaggregated data should be collected regularly to assess and monitor women's ownership of productive assets, especially land.
- Unequal inheritance laws need reform for gender equality, while gender-equal laws should be implemented effectively, by raising legal awareness among women, their families, and government administrators; providing women legal aid where needed; and changing parental attitudes towards endowing daughters with immovable property.
- Land and immovable assets distributed by the government should go to both spouses, and to women alone in female-headed households.

- Women's market access to land needs particular attention. Access can be improved by providing subsidised loans and grants to poor women to buy or lease land in groups.

### **2. Promoting group farming for transformative institutional change.**

- Group farming has relevance for many G20 countries facing resource inequalities and scarcities, be it of land, labour, or capital. Its transformative potential needs recognition and measures taken to promote it across countries. The Kerala model can be adapted to local conditions by countries where smallholders dominate, and the French model can be adapted where medium-sized farms are common.

Overall, these recommendations can help create a new model of agriculture that is environmentally sustainable, economically profitable, and gender-egalitarian.

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