NAVIGATING THE IMPLICATIONS OF AGROFORESTRY REGULATIONS ON COOPERATIVE ENTERPRISES IN KARNATAKA, INDIA

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ABSTRACT

This research paper studies how farmers in Karnataka, India can work together in groups called cooperatives to solve their problems with getting permission papers (called licenses) to cut and sell trees they grow on their farms. Agroforestry means farmers grow trees along with their regular crops like rice or vegetables, which can help them earn extra money, but they need special government permission to cut these trees when they are ready. The study found that when farmers join together in cooperatives instead of working alone, they become much stronger and can better convince government officials to give them the licenses they need and make the rules easier to follow. The research looked at many successful examples from around the world, especially India's famous Amul dairy cooperative where milk farmers worked together and became very successful, and also examined government reports, laws, and academic studies to understand why the Karnataka Preservation of Trees Act, 1976 makes it so difficult for individual farmers to get timber licenses. The findings show that farmer cooperatives help in three important ways: they give farmers a louder voice when talking to government officials about getting licenses, they help farmers learn about new technology and better ways to grow trees, and they help India achieve its big goals of reducing poverty, fighting climate change, and protecting forests. The research concludes that the Indian government should encourage and support farmers to form agroforestry cooperatives and should make the licensing process much simpler, because this would help farmers make more money from their land, reduce India's need to buy expensive timber from other countries, and help protect our environment for future generations.

Keywords: Farmer Cooperatives, Agroforestry, Timber Licensing, Karnataka, sustainability

Chapter 1 - Introduction

Chapter 1.1 - Background of the Study

When a farmer wants to grow trees on his land along with his regular crops, this practice is called agroforestry - it's like having the best of both worlds where you can grow food crops and also grow trees for timber, fruits, or other products. However, the farmer faces a big problem: when his trees are ready to be cut and sold, he needs special permission papers from the Forest Department.[1] Getting these licenses is very difficult and takes a long time, which makes many farmers lose interest in growing trees.

India is the world's seventh-largest country by area and has some of the most fertile land in the world. Yet, many timber factories in India have to buy wood from other countries because not enough farmers are growing trees.[2]

In Karnataka state, there is a law called the Karnataka Preservation of Trees Act, 1976, which was made to protect trees and stop people from cutting them down unnecessarily. While this law is important for protecting the environment, it also makes it very hard for farmers to get permits to cut trees they have grown on their own land. The rules are so complicated that many farmers simply avoid growing trees altogether.

This is where cooperatives come in. A cooperative is like a club where farmers join together to help each other solve common problems.[3] When farmers work together in cooperatives, they can share resources, learn from each other, and have a stronger voice when talking to government officials. The most famous example in India is Amul, the dairy cooperative that helped millions of milk farmers get fair prices for their milk.

The idea behind this research is that if farmers form cooperatives specifically for agroforestry, they could work together to make it easier to get timber licenses. Instead of each farmer struggling alone with complicated paperwork and long waiting times, a cooperative could help all its members navigate the system more effectively.

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[1] Karnataka Preservation of Trees Act, 1976, S.8, Karnataka Act No. 76 of 1976 (India).
[2] Sarath S. et al., Agroforestry in achieving Amrit Kaal Vision 2047: insights on wood resource sustainability and development, 128 CURRENT SCI. 6 (2025).
[3] Abdykaliyeva, Z. et al., The role of agricultural cooperatives in economic development: international experience, INT'L REV. APPLIED ECON., 1-18 (2025), https://doi.org/10.1080/02692171.2025.2498351.

Chapter 1.2 - Statement of Problems

The main problem this research addresses is that forestry regulations in India are heavily controlled by state governments and their forestry departments.[4] In Karnataka, the Preservation of Trees Act, 1976 contains old colonial-era rules that make it very difficult for individual farmers to get the licenses they need to harvest timber from trees they have planted on their own land.[5] These rules were originally designed during British rule when the government wanted to control all forest resources, but they haven't been updated to help modern farmers who want to grow trees as a business.

Without proper licenses, farmers cannot legally cut and sell trees they have grown, which means they see no benefit in investing time and money in agroforestry.[6] This has several negative effects:

First, it hurts the farmers' income. Trees can be valuable - for example, teak wood sells for ten times the price of eucalyptus wood.[7] When farmers cannot grow and sell timber legally, they miss out on this extra income that could help them support their families.

Second, it affects the timber industry. Some timber factories in India have to import wood from other countries because there isn't enough locally produced timber.[8] This costs the country foreign money and makes wood products more expensive for everyone.

Third, it impacts the environment. When farmers don't grow trees, there are fewer trees to absorb carbon dioxide from the air, which contributes to climate change.[9] Trees also help prevent soil erosion and provide homes for wildlife

The current system also creates other problems. There is a new Ministry of Cooperatives at the central government level, but some people worry that this might reduce the independence of state-level co-operatives.[10] Sections 123 and 124 of the Multi-State Cooperative Societies Act,

[4] Forest Resource Management Wing, Karnataka Forest Department, Assessment of Wood Availability in Karnataka (2021).
[5] Karnataka Preservation of Trees Act, 1976, Karnataka Act No. 76 of 1976 (India).
[6] Id
[7] EAC-PM, Agroforestry: Missing Trees for the Forest, Working Paper (2024).
[8] Sarath S. et al., supra note 3.
[9] Singh, Navdeep et al., supra note 1.
[10] Multi-State Co-operative Societies Act, 2002, §§ 123-124, Act No. 39 of 2002 (India).

2002 give the central government power to interfere in cooperative societies, which might make potential farmers avoid the practice altogether.

Additionally, while farmer groups exist in many places, they don't have the same bargaining power or lobbying strength that proper farmer cooperatives could provide. Lobbying means trying to convince government officials to change rules or policies, and it's much more effective when done by organized groups rather than individuals.[11]

Chapter 1.3 - Research Questions

1. This research aims to answer four main questions:

2. Can agroforestry cooperatives help farmers get timber licenses from the Karnataka Forest Department more easily?

3. Can Section 2 of the Karnataka Cooperative Societies Act, 1959 be used better to encourage the formation of agroforestry-based cooperatives?

4. Has the establishment of the Ministry of Cooperatives at the central level affected the independence of state-level cooperatives under Sections 123 and 124 of the Multi-State Cooperative Societies Act, 2002?

5. Can promoting agroforestry practices help achieve Sustainable Development Goals 1, 13, and 15?

Chapter 1.4 - Research Objectives

1. Based on the research questions above, this study has four main objectives:

2. Examine how cooperatives can help with lobbying for regulatory clearances from the forestry department.

3. Prove that government support is sufficient to help farmers form cooperatives for agroforestry.

[11]Adhip Narayan Banerjee & Riddhi Banerjee, Farming: Cooperatives in India: Problems and Prospects, 24 SUPREMO AMICUS 481 (2021).

4. Analyze the legislative and political impact of the Multi-State Cooperative Societies Act.

5. Study how farmers' cooperatives can help fulfill Sustainable Development Goals 1, 13, and 15.

Chapter 2 - Literature Review

1. **Singh Navdeep, Biswas Deepa, Gokhale Yogesh, Kumar Kapil (2024). Incentivising Agroforestry Through Carbon Revenue: Augmenting Farmers & Income in India. AGRICULTURAL SCIENCE DIGEST. 44(4): 679-683**

This research paper focuses purely on the environmental benefits of agroforestry and how farmers can be incentivised to take it up on their farmlands. The paper also supports the idea that agroforestry can help fight climate change by showing data of various trees that help in carbon sequestration. A wide variety of trees including eucalyptus, acacia and poplar have been studied which has revealed different degrees of carbon sequestration. This, the authors argue, can be used to promote the type of tree species that can help better at absorbing carbon dioxide from the atmosphere if the government takes note of it and makes a scheme to include carbon credits to farmers. Although the paper is quite insightful about carbon credits, it is not useful to the researcher's paper.

What helps is the fact that these trees can not only provide economic benefits to the timber industry it can also majorly help in fulfilling sustainable development goal 13 (combating climate change), which is one of the sustainable development goals which the researcher will be looking into in his research paper. The paper also talks about the adoption of the national forest policy, 2014 by the states which is seen to reduce the licensing requirements for timber procurement which is a drawback for independent farmers, giving much needed information to the researcher.

The glaring gap in the literature is that it fails to clarify how the system of carbon credits can actually benefit the farmers and how they can be taken into confidence by the system in a country like India. Moreover, the inclusion of Eucalyptus species for agroforestry is also counterintuitive to sustainable development goal 15 as it has been proven to degrade the land that it has been planted on.

2. **Abdykaliyeva, Z., Baidybekova, S., Abdykalyk, S., Baitarakova, B., & Kenjassarova, A. (2025). The role of agricultural cooperatives in economic development: international experience. International Review of Applied Economics, 1–18. https://doi.org/10.1080/02692171.2025.2498351**

This research article is a comparative analysis of the effect that agricultural cooperatives around the world has had on the farming communities. Countries such as the United States of America, Japan, Germany and also India have been studied in this regard. Various sectors such as farming, industrial packaging and dairy have been explored. The paper set out to find out the economic impact such cooperatives have had on not only the farming community but the country as a whole.

The findings have been remarkable in that they have established that across the selected countries, there has been a consistent increase of around 40% in the income that the farmer has achieved due to the streamlining of collective efforts of these cooperatives for obtaining regulatory clearances for producers. This has had positive effects on rural development as the grassroot level is directly benefitted from such efforts that include cultivation, harvests and marketing. The countries have also witnessed consistent contribution to share of their GDP, although it differs quite widely from nation to nation. This helps in fulfilling the sustainable development goal 1 that agroforestry also aims to achieve.

The Indian aspect has been studied through the Amul cooperative, and is heralded to be a shot in the arm for farmers as now their product is now available nationwide and worldwide. Such cooperatives can help not only dairy, but also agroforestry as that is what is the need of the hour for the Indian timber market and farmers.

The drawback of this literature is the fact that the same sector of agriculture has not been considered for all these countries while arriving at their findings.

3. **Sarath S., Siril, Sajitha., Shahina N.N., Nikhil P.V. (2025) Agroforestry in achieving Amrit Kaal Vision 2047: insights on wood resource sustainability and development, CURRENT SCIENCE, 128 (6)**

The paper makes an analytical study on how sustainable development in the farming sector can contribute to achieving the Amrit Kaal vision of Prime Minister Narendra Modi. The paper

points out that the true potential of India in agroforestry hasn't been realised as only around 8% of the agricultural landmass has been taken up for agroforestry. Because of this the country's timber industry is heavily dependent on imports, which also causes loss to local farmers as it reduces timber prices. The paper also mentions the ecological benefit of agroforestry through carbon sequestration, that help in achieving sustainable development goal 13. The paper laments how uneducated Indian farmers are when it comes to adopting agroforestry and calls it a failure of the government in promoting the market, but if done so an "evergreen revolution" can be achieved is what the authors claim. The paper is informational in that it does talk about what the researcher wants to touch up on the industrialisation of the timber sector, while also delivering on the sustainable development goal. The drawback of this paper is that the authors are vague in what kind of necessary steps the stakeholders can take in order to promote and develop the sector. They give cliched and broad ideas for the same.

4. **Adhip Narayan Banerjee & Riddhi Banerjee, Farming: Cooperatives in India: Problems and Prospects, 24 SUPREMO AMICUS [481] (2021).**

This is an empirical and doctrinal study with the aim of proving that the cooperative system in India has seen stellar success thanks to the government's back and policy making push. The agricultural and forestry sector have also been given the independence to form cooperatives, yet, of all the sectors the agricultural sector remains the only one that has not seen consistent success locally, the paper seeks to look into it. The paper does state that the dampening growth of agricultural cooperatives doesn't have the government to blame but rather the 'act of god', in that the changing weather conditions and poor harvest plans have severely impacted the penetration of success that cooperatives have generally seen. The National Cooperative Policy of 2002 has also led to cooperatives helping farmers economically by streamlining the market access, advertisement and allied services that benefit farmers. The fact that the paper highlights how industrial cooperatives for processing agro products have seen success, helps out in the present research paper as well. The gap this research still possesses is the data that it analyses. The data was already 3 years old when the authors wrote this paper, and now there will be even more discrepancies.

5. **J. C. Ryan, Co-operatives in Asia: Recent Developments and Trends, 92 INT'l LAB. REV. 462 (December 1965).**

This is another comparative analytical study of the agricultural cooperatives in Asian countries

from the perspective of a western researcher. The researcher aims to find out how success has been realised by governmental interference in agricultural cooperatives and also whether there have been any adverse impacts due to the very interference. The research has been conducted during the 1950s to 1960s period, therefore it was done during the nascent period of cooperative system in India, giving the present researcher a better understanding of how agroforestry cooperatives can be promoted in a new sector that not many are keen to heavily invest in. The paper highlights how the government of India had taken steps to promote primary level cooperatives (the farmers/producers) by bringing in strict guidelines that ensured that it was the primary producer who benefitted, and this success was in fact realised. The points that helped was how the government framed rules that enabled the weaker sections of society to approach regulatory agencies for procuring clearances for industrialisation of agro products, and also the boost given to marketing of those products when cooperatives were set up. Another major advantage that the researcher mentions is how the government was always willing to purchase agricultural goods while also providing warehousing facilities.

This research proves that there can be success in cooperatives if the government shows intent and interferes with cooperatives. This allows a Raiffeisen model of cooperatives to be established. The major drawback of this research is how the research focuses on the credit system of cooperatives in the early days of India. The gap remains the fact that it focuses only on the primary agricultural sector of India.

6. **Klara Bak, Agricultural Cooperatives as a Determining Form of Agricultural Enterprise, 57 ANNALES U. SCI. BUDAPESTINENSIS ROLANDO EOTVOS NOMINATAE 43 (2018)**

This is a comparative analytical study on the popularity of agricultural cooperatives worldwide with the aim that agricultural cooperatives are a way for economic success for the stakeholders of a particular sector. The paper mentions how cooperative members in some developed countries are on par with private entrepreneurs taking entrepreneurial risks in their respective fields. The paper promotes cooperatives of farmers stating that it allows collective bargaining for their product while also advertising the same due to sheer number of participants, while also providing equal distribution of monetary benefits among the members. The author also mentions how cooperatives shined during the industrialisation of the sector as it only enabled farmers to expand their agribusiness to dairy, fish, floriculture, etc. A point to 'Hangya' system

has also been made which is a system that educates the farmers on matters related to cooperative management, and marketing and processing of agricultural goods.

While what's been mentioned above was also a character of Indian cooperatives in the 50s, they aren't practiced anymore. However, such an approach would be beneficial to the idea of setting up farmer cooperatives purely for the purpose of agroforestry. Even if the government is not keen on interfering, they can at the very least educate interested people in order to let them alone run the cooperatives. The research gap here still remains to be the lack of study on cooperative policies of developing countries. While the developing countries have been mentioned in the paper, the analysis of the same hasn't been taken out.

7. **Aktam U. Burkhanov, Suluv Y. Khamidova, et.al, Agroforestry as a Nature-Based Climate Resilience Strategy: Addressing Desertification and Land Degradation in the Kazakh Kyzylkum Desert's Marginal Agroecosystems. Caspian Journal of Environmental Sciences (2025)**

This is an empirical study conducted by Kazakh researchers regarding the issue of desertification in Kazakhstan deserts. The researchers conducted in-depth tests by collecting primary data such as soil samples, meteorological data as well as local societal inputs on the geographical changes in a specific area. They concluded that if indigenous species of trees are planted using modern techniques, there can be a reduction of up to 25% in desertification, while ultimately leading to reversing desertification itself. The relevance of this study is that while it has been conducted in a Kazak desert, India too experiences rapid desertification owing to poor urbanization and erratic weather, in order to combat the same agroforestry can be taken up by government and private persons. This study also supports the view that agroforestry can help in achieving sustainable development goals 13 and 15, which the researcher intends to look into in his research paper. While the paper does provide solid groundwork that supports agroforestry as a way towards fulfilling SDGs, it does fall short in answering how private persons and local communities can be convinced to take up water resistant dry crops that do not offer much economic returns in short periods. It is mostly a paper that promotes governmental efforts for agroforestry and not private enterprise.

8. **Sharvari Patil, Mita Mehta, Garima Pancholi & Abhineet Saxen, Unveiling the dynamics of farmer producer organizations in India: a systematic review of status, challenges, and future directions, Humanities and Social Sciences**

Communications. (2025)

This is an empirical study conducted to study the growth of FPO (farmer producer organizations) in India in modern times. The study aims to show that there are significant policy lacunae concerning FPOs in India. The paper suggests that the corruption in prevailing cooperative structures pulls the farmers away from them towards the newer Farmer producer organisations. The 2003 APMC Act aimed to improve marketing but led to monopolistic practices and high costs. Farmer Producer Organizations (FPOs) were introduced via the 2002 Companies Act amendment, aiming to enhance access to capital, technology, and markets. The paper also suggests that despite their potential, FPOs struggle with financial sustainability and market participation. It highlights recent studies that emphasize the need for policy interventions, digital tools, and inclusive leadership to strengthen FPOs and ensure sustainable agricultural growth.

This paper, while not entirely supportive of cooperatives, does mention their initial success and popularity. But also, the FPOs also provide a new opportunity for farmers to exploit if they feel that cooperatives are not supportive of them or abuse them. The research does highlight FPOs' role in improving access to markets and technology but there is limited empirical evidence on how adopting digital tools can actually help in scalability, considering the industriousness of rural farmfolk.

9. **Ahadiel Elirehema Mmbughu, Mangasini Athanas Katundu & Meda Theodory Mrimi, Leveraging co-operatives for community development: insights from cashew farmers in Tanzania amid the negative impact of climate change, Discover Sustainability (2025)**

This is an empirical and qualitative study on the effect that cooperatives have on farmers in Tanzania. The aims of the study are multifold: to explore how agricultural cooperatives empower cashew farmers in Tanzania to enhance community development by leveraging collective action and shared resources and investigate how cooperatives help farmers mitigate the negative impacts of climate change, such as erratic rainfall, through improved access to markets, resources, and adaptive strategies. The study states that cooperatives for such cases can solve societal issues as well, and not just environmental and economic, by elucidating on social capital theory, and resilience theory. While community-based solutions are highlighted there is no structured governance that is researched upon, which begs to question the viability

of such cooperatives in the long run. This research still does highlight well enough about the fact that community well-being plays a role in sustainable development goals.

10. **Lingxi Chenyang, Andrew Currie, Hannah Darrin & Nathan Rosenberg, Farming with Trees; Reforming U.S. Farm Policy to Expand Agroforestry and Mitigate Climate Change, 48 ECOLOGY L.Q. 1 (2021).**

This is a historical analysis of agriculture and agroforestry in the United States of America regarding the failure and prevailing pessimist tendencies of farmers in adopting agroforestry. The research goes on to talk at length about how diversified farming practices mixed with agroforestry can not only improve the condition of the soil but also lead to increased crop output. But the paper highlights how centuries of bad farming practices and mentality prevents the American farmer from taking up different approaches to farming. The paper also talks about outdated policies by the states that favour traditional monoculture cropping patterns and doesn't provide any subsidies for taking the risk of agroforestry. This paper may seem irrelevant to India, but there is a prevailing sentiment of pessimism towards the monetary side of agroforestry just as there is in the USA because of lack of incentives from the government. The researchers also throw light on different patterns of agroforestry that can be taken up to make more efficient use of the land and soil resources, which can be helpful in India as well with its extreme heat.

The paper is mostly well researched but falls short on highlighting any lobbying efforts by the enterprises to favour agroforestry. In a pro-capitalist country like the USA, it is surprising to see the lack of agroforestry-based enterprises that lobby the government to support the sector.

Chapter 3 - The Power of Collective Action: How Cooperatives Can Improve License Acquisition

When farmers work alone, they often face many challenges in dealing with government offices and complicated paperwork. However, when they join together in cooperatives, they become much more powerful and effective. This chapter examines how cooperatives can help farmers get timber licenses more easily. Understanding the Current Licensing Challenge of getting a timber license in Karnataka is like trying to solve a very difficult puzzle. Individual farmers must navigate through multiple government departments, fill out complex forms, and

wait for long periods to get approval.[12] The Karnataka Preservation of Trees Act, 1976 requires farmers to obtain permission before cutting trees, even on their own land. This process can take months or even years, and many farmers find it so frustrating that they give up.

The new National Timber Management System (NTMS) introduced in 2025 aims to make this process easier by allowing online applications.[13] However, even with this digital system, individual farmers may still struggle with the technical requirements and documentation needed.

How Cooperatives Change the Game Cooperatives can solve many of these problems through collective action. Here's how: Shared Knowledge and Expertise: When farmers join a cooperative, they can share information about the licensing process. If one member learns how to fill out the application forms correctly, they can teach others. This is much more efficient than each farmer trying to figure it out alone.[14]

Professional Support: Successful cooperatives like Amul employ professionals to handle business operations and government relations.[15] An agroforestry cooperative could hire experts who specialize in timber licensing to help all members with their applications.

Economies of Scale: Instead of each farmer paying individual fees and costs for licenses, a cooperative can process multiple applications together, reducing costs for everyone. The cooperative can also invest in better technology and equipment that individual farmers couldn't afford alone.

Stronger Negotiating Power: Government officials are more likely to pay attention to a cooperative representing hundreds or thousands of farmers than to individual farmers asking for help.[16] This is similar to how workers' unions are more effective than individual workers in negotiating with employers.

[12] How to Apply Timber License Online?, KANAKKUPILLAI, https://www.kanakkupillai.com/learn/apply-timber-license-online/ (May 4, 2025).
[13] Ministry of Environment, Forest and Climate Change, Model Rules for Felling of Trees in Agricultural Lands (2025).
[14] Klara Bak, Agricultural Cooperatives as a Determining Form of Agricultural Enterprise, 57 ANNALES U. SCI. BUDAPESTINENSIS ROLANDO EOTVOS NOMINATAE 43 (2018).
[15] About Us - The Amul Model, supra note 21.
[16] What are the methods used by the Farmers organizations to influence the policy makers in India and how effective are these methods, EDUKEMY BLOG (Jan. 28, 2024).

Evidence from Other Sectors. The success of dairy cooperatives in India provides strong evidence that cooperatives can effectively deal with regulatory challenges. The Gujarat Cooperative Milk Marketing Federation (which runs Amul) successfully navigated complex regulations related to milk processing, quality standards, and interstate transportation. They achieved this by working closely with government agencies and maintaining professional standards that earned them regulatory trust. Lobbying and advocacy are the most important ways cooperatives can help is through lobbying - the process of trying to influence government policy. Individual farmers have very little influence when they ask for policy changes, but cooperatives can be much more effective.[17]

Indian farmers' organizations have used various methods to influence policy makers:

1. Awareness campaigns - educating the public and media about farmers' problems

2. Direct lobbying - meeting with government officials to discuss policy changes

3. Protests and demonstrations - organizing peaceful protests to draw attention to issues

4. Legal advocacy - working with lawyers to challenge unfair regulations in court

Chapter 4 - Government Support and Policy Framework for Cooperative Development

The success of farmer cooperatives depends greatly on government support and favorable policies. This chapter examines what support currently exists for forming cooperatives in India and whether it's sufficient to encourage agroforestry cooperatives.

India has a long history of supporting cooperatives, dating back to the early 1900s when the British government passed the first cooperative societies act. After independence, the Indian government recognized cooperatives as important tools for rural development and poverty reduction.[18]

The success of Amul, which began in 1946, demonstrated the potential of cooperatives when supported by government policy. The cooperative received crucial support from leaders like Sardar Vallabhbhai Patel and later from the national government, which helped create the

[17] Id
[18] J.C. Ryan, Co-operatives in Asia: Recent Developments and Trends, 92 INT'L LAB. REV. 462 (Dec. 1965).

National Dairy Development Board in 1965 to replicate the Amul model across India.

Today, several government policies and programs support cooperative development:

National Cooperative Policy 2002: This policy provides a framework for promoting cooperatives across all sectors of the economy. It emphasizes that cooperatives should be autonomous, democratic organizations controlled by their members.[19]

Ministry of Cooperation: Established recently at the central level, this ministry is specifically dedicated to promoting cooperative development. However, some researchers worry that central control might reduce the autonomy of state-level cooperatives.[20]

National Agroforestry Policy 2014: This policy specifically promotes agroforestry and addresses some of the regulatory challenges farmers face. It calls for liberalizing felling and transit regulations for trees grown on non-forest private lands.[21]

Sub-Mission on Agroforestry (SMAF): This government program provides financial and technical support for agroforestry activities, including support for farmer organizations.[22]

Karnataka State-Level Support:

In Karnataka specifically, several policies support cooperative development:

Karnataka Cooperative Societies Act, 1959: Section 2 of this act provides the legal framework for forming cooperatives in the state. The act allows cooperatives to be formed for various purposes, including agricultural and forestry activities.[23]

In 2025, the Indian government introduced Model Rules for Felling of Trees in Agricultural Lands, which represent a major shift toward supporting agroforestry.[40] These rules establish:

- State Level Committees to promote agroforestry and simplify regulations

[19] Policy & Process Guidelines For Farmer Producer Organizations, Ministry of Food Processing Industries (Apr. 1, 2013).
[20] Multi-State Co-operative Societies Act, 2002, §§ 123-124, Act No. 39 of 2002 (India).
[21] National Agroforestry Policy 2014, Ministry of Agriculture (2014).
[22] Sub-mission on agro-forestry (smaf), Karnataka Forest Department.
[23] Karnataka Co-operative Societies Act, 1959, § 2, Karnataka Act No. 11 of 1959 (India).

- The National Timber Management System (NTMS) for online applications

- Simplified procedures for small-scale tree feeling

- Provisions for empanelling verification agencies

Chapter 5 - Legislative Impact and Sustainable Development Goals

This final analytical chapter examines how current laws affect cooperative formation and operations, and explores how agroforestry cooperatives could contribute to India's sustainable development commitments.

The legal framework governing cooperatives in India is complex, involving multiple acts and levels of government. This complexity can either support or hinder cooperative development, depending on how well the different laws work together.

Multi-State Cooperative Societies Act, 2002: This central law governs cooperatives that operate in multiple states. Recent changes to this act have created both opportunities and concerns:

- The act allows cooperatives to operate across state boundaries, which could benefit large agroforestry cooperatives that want to access markets in different states

- It provides a uniform legal framework that reduces confusion and legal complications

- The act includes provisions for professional management, which could help cooperatives operate more efficiently[41].

- Sections 123 and 124 give the central government power to take over cooperatives if they are deemed to be performing poorly[42]

- This power could make farmers reluctant to join cooperatives because they fear government interference

India has committed to achieving the United Nations' Sustainable Development Goals by 2030. Agroforestry cooperatives could make important contributions to at least three of these goals:

SDG 1: No Poverty

Agroforestry can significantly increase farmer incomes. Research shows that high-value trees like teak can sell for ten times the price of eucalyptus, directly enhancing farmers' earnings.[24]

Cooperatives can help farmers access these opportunities by:

- Providing information about high-value tree species and markets

- Helping farmers get the licenses and certifications needed to sell timber legally

- Negotiating better prices through collective marketing

- Sharing the costs of equipment and technology needed for timber processing

SDG 13: Climate Action

Trees are one of nature's most effective tools for fighting climate change because they absorb carbon dioxide from the atmosphere. Agroforestry cooperatives can contribute to climate action by:

- Encouraging more farmers to plant trees by making it economically viable

- Helping farmers choose tree species that are most effective at carbon sequestration

- Facilitating participation in carbon credit markets, where farmers can earn money for the environmental services their trees provide.[25]

SDG 15: Life on Land

This goal focuses on protecting terrestrial ecosystems, sustainably managing forests, and combating desertification. Agroforestry cooperatives can contribute by:

- Increasing tree cover outside of natural forests, reducing pressure on protected forest areas

- Promoting biodiversity by encouraging diverse tree species and integrated farming systems

[24] EAC-PM, supra note 11.
[25] Singh, Navdeep et al., supra note 1.

- Preventing soil erosion through tree planting on agricultural lands[26]

Chapter 6 - Conclusion and Suggestions

This research has examined how farmer cooperatives could help solve the challenges faced by agroforestry in Karnataka, India. Through analyzing existing literature, government policies, and regulatory frameworks, several important conclusions have emerged.

The research confirms the hypothesis that forming farmer cooperatives can indeed help farmers in lobbying for timber licenses and navigating complex regulatory systems. The evidence shows that cooperatives provide several advantages over individual action:

Collective Bargaining Power: When farmers work together through cooperatives, they have much stronger influence with government officials and regulatory agencies. This has been demonstrated successfully in other agricultural sectors, most notably through the Amul dairy cooperative, which has helped millions of farmers access markets and fair prices.

Shared Resources and Knowledge: Cooperatives allow farmers to pool their resources to hire professionals, invest in technology, and share knowledge about regulatory requirements. This makes it much easier for individual farmers to navigate complex systems like the timber licensing process.

Economic Viability: The research shows that agroforestry can significantly increase farmer incomes - teak trees can sell for ten times the price of eucalyptus. However, these benefits are only accessible when farmers can obtain proper licenses and access markets, which cooperatives can facilitate.

Environmental Benefits: Agroforestry cooperatives can contribute to achieving Sustainable Development Goals by increasing tree cover, sequestering carbon, and promoting biodiversity. This addresses both local environmental challenges and India's international commitments. The research also identified several significant challenges:

Regulatory Complexity: Despite recent improvements like the Model Rules for Timber Licensing, the regulatory framework remains complex and difficult for individual farmers to

[26] Achieving the Global Goals through agroforestry, AGROFORESTRY NETWORK (Sept. 29, 2018).

navigate. Multiple laws and agencies are involved, creating confusion and delays.

Limited Government Support: While government policies exist to support cooperatives and agroforestry, the actual implementation often falls short. Bureaucratic delays, limited funding, and poor coordination between agencies continue to be problems.[27]

Suggestions for Improvement

Based on these findings, several specific suggestions emerge:

For Government Policy:

1. Create One-Stop Service Centers: Establish centers where farmers can access all services related to cooperative formation, timber licensing, and agroforestry support in one location.

2. Simplify Licensing Procedures: Build on the recent Model Rules for Timber Licensing by further simplifying procedures, especially for small-scale operations and cooperative members.

3. Provide Targeted Support: Develop specific support programs for agroforestry cooperatives, including financial assistance for formation, technical training, and market development.

For Cooperative Development:

1. Start with Pilot Projects: Begin with small pilot cooperatives in areas where farmers are already interested in agroforestry.

2. Focus on Education: Provide comprehensive education to farmers about the benefits of both agroforestry and cooperative membership.

3. Build Professional Capacity: Ensure that cooperatives have access to professional management and technical expertise, following the successful Amul model.

Looking ahead, agroforestry cooperatives could play a transformative role in Indian agriculture. If successfully implemented, they could:

[27] Sharvari Patil et al., Unveiling the dynamics of farmer producer organizations in India: a systematic review of status, challenges, and future directions, HUMANITIES & SOC. SCI. COMM. (2025).

- Help India become self-sufficient in timber production.
- Significantly increase rural incomes and reduce poverty.
- Contribute to India's climate change mitigation efforts.
- Demonstrate a sustainable model of development.

The formation of farmer cooperatives for agroforestry represents an opportunity to address multiple challenges simultaneously - rural poverty, environmental degradation, regulatory complexity, and India's dependence on timber imports. The evidence suggests that the hypothesis is correct: farmer cooperatives can indeed help in lobbying for licenses and overcoming regulatory barriers. More importantly, they can help create a more sustainable and prosperous future for Indian farmers while contributing to the country's environmental and development goals.