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Mahogany and teak furniture: action research to improve value chain efficiency and enhance livelihoods

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prepared by Dr Herry Purnomo, Project Leader
Center for International Forestry Research (CIFOR)
Jl. CIFOR, Situ Gede, Sindang Barang, Bogor Barat, 16115, Indonesia

*co-authors/
contributors/
collaborators* Bayuni Shantiko, Rika Harini Irawati, Ramadhani Achdiawan, Atie Puntodewo, Melati Anggara (CIFOR); Nunung Parlinah, Rachman Effendi (FORDA); Efi Yulianti Yovi, Dodik Ridho Nurrochmat, Bahruni (IPB); Sulthon M. Amin, Margono and Legiman Arya, Ahmad Zainudin (APKJ)

approved by Tony Bartlett, Research Program Manager for Forestry, ACIAR

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- Dr D. Andrew Wardell, Research Director Forests and Governance Portfolio at the Center for International Forestry Research (CIFOR), reviewed and endorsed this final report for submission to ACIAR.
- Professor Peter Kanowski, Deputy Director General, CIFOR
- enquiries about the research conducted during this project can be directed to the Project Leader, Dr. Herry Purnomo at CIFOR. Email: h.purnomo@cgiar.org

2 Executive summary

The international trade in furniture is of great value to Indonesia, whose annual furniture exports in 2012 are valued at US\$1.79 billion, more than half of which is contributed by wooden furniture. As furniture making is highly labour-intensive and is dominated by small and medium enterprises (SMEs), the health of the industry is important for efforts to alleviate poverty, expand forest plantations sustainably and reduce unemployment. Furniture making is central to the history and culture of Jepara, a district in Central Java, Indonesia. About 10% of the furniture made in Indonesia comes from Jepara, which has about 12,000 furniture business units and processes an estimated 0.9 million cubic metres of wood each year. The furniture industry accounts for about 26% of the district's economy. Annual exports of Jepara furniture in 2012 were valued at US\$110 million. However, although the overall value-added is high, it is unevenly distributed among the actors in the value chain. SMEs lack skills in marketing and management and have weak institutional capacity and, as a result, they derive the least value-added.

CIFOR, in collaboration with the Forestry Research and Development Agency of the Indonesian Ministry of Forestry and the Faculty of Forestry of Bogor Agricultural University, conducted value chain analysis and participatory action research under this project. The overall aim of the project was to improve the performance of teak and mahogany small-scale furniture enterprises in Jepara, which was achieved by enhancing the structure and function of the Jepara furniture industry and improving marketing by small-scale furniture producers and their industry associations in Jepara. The research and development focussed on overcoming the constraints related to inefficiencies in supply and value chains, lack of direct marketing, low levels of organisation among furniture producers and limited access to finance. A comprehensive value chain was developed that showed that the governance relationships between small scale furniture producers and sawmill owners or wood retailers were market based but that the governance relationship with domestic retailers, brokers and exporters is regarded as a directed network, where those up the value chain can easily shift their business between one small enterprise and another.

Four scenarios were generated based on the value chain analysis and were explored in the participatory action research. The first scenario, "moving up", encourages small-scale furniture producers to move up in the value chain. The "collaborating-down" scenario urges small-scale furniture producers to collaborate with wood traders and tree growers to secure sustainably grown wood supplies. The "association" scenario suggests forming local organisations, which can then assist members in accessing credit through financial institutions and in improving access to established and/or new markets. The fourth scenario, "green furniture", considers the production of certified, eco-labelled or "green" furniture, which requires vertical and horizontal coordination between companies in the value chain. At policy arena, we worked on developing a comprehensive strategy for sustaining the Jepara furniture industry. Findings from the project have been disseminated in multiple forms, including articles in scientific journals, books, Infobriefs, conference papers, newsletters, a project website, media articles and local radio broadcasts.

The main results and project impacts are as follows. (1) Small-scale furniture producers associated with the project have managed to increase their income thanks to better understanding of the market, training provided under the project, participation in trade exhibitions and use of online marketing to reach a wider market. (2) The Jepara Small-scale Furniture Producers Association (APKJ) was legally established and is functioning, and has emerged as an effective forum for improving its members' capacity to manufacture better-quality furniture, to deal with management issues and to reduce the time to product delivery. (3) A comprehensive strategy for the development of the furniture industry (the "roadmap") was created for the period 2013–2023 and a Jepara District Regulation based on the roadmap was drafted. (4) A group of nine small-scale furniture

producers and one individual obtained certification under Indonesia's national timber legality assurance system (or *Sistem Verifikasi Legalitas Kayu* [SVLK]). (5) Furniture producers have become more efficient in their use of wood and value chains. (6) The capacity of Indonesian partners in conducting value chain analysis and participatory action research has been developed.

Some of the key lessons from this project include:

1. It is important to have baseline data before applying the intervention. Baseline data are needed if researchers are to understand the local context and circumstances and then measure changes and project impacts after the intervention. The structure and networks of project beneficiaries have to be understood to ensure impacts are distributed efficiently among beneficiaries.
2. VCA and its dynamics provided a systemic understanding of the role of small-scale furniture producers in Jepara in the value chain. The scenarios of "moving up", "collaborating down", "association" and "green furniture" had different levels of success. The most successful were the moving-up and association scenarios, followed by the green furniture and collaborating-down scenarios.
3. The use of participatory action research (PAR) in the "association" scenario led to small-scale furniture producers forming an industry association called the Jepara Small-scale Furniture Producers Association (APKJ). Through this association, members were able to access new markets and bank loans.
4. Participatory processes were also used successfully to facilitate policy changes, including the roadmap for the Jepara furniture industries and OH&S (Occupational Health and Safety) policies, that are going to be issued as Jepara district laws. Stakeholders must feel a need for an intervention, as seen in the case of the roadmap and have access to relevant policy stakeholders. The roadmap-development process itself served to strengthen small-scale furniture producers' bargaining position and build trust in government bodies.
5. To scale out the project impacts, it is necessary to help project beneficiaries to develop a network beyond the study area. Having a broader network will provide them with greater opportunities to collaborate with others and enable them to further improve their business performance.

It is recommended that future research activities are required: (1) to better understand timber supply chains for the Jepara furniture industry from across Indonesia and abroad; (2) to apply lessons learnt from the formation of the APKJ and obtaining SVLK licence or certification to other Indonesian centres for manufacturing commodities from forest products; (3) to stimulate policy and institutional innovations at all levels and so generate opportunities for SMEs; and (4) to better understand furniture value chains in other ASEAN countries.

3 Background

Furniture, palm oil, rubber and footwear are Indonesia's main exports after petroleum and gas. The total value of the country's furniture exports in 2012 was US\$1.79 billion, of which more than half (US\$0.98 billion) came from wooden furniture (UNCOMTRADE 2013). Income derived along the furniture value chain is the main source of livelihood for 5 million people in Java, Indonesia.

Teak and mahogany are among the most valuable tropical timbers used for furniture. In 1998, the Indonesian furniture industry experienced a boom and turned to mass production of low-value furniture for domestic and international markets; this trend seriously compromised the sustainability of teak and mahogany plantations. More recently, the industry has stagnated, with a reduced share in the global market. Furthermore, in the wake of the 2008 global financial crisis, the market orientation shifted from the global to the domestic market. Before the crisis, Indonesian furniture producers sold about the same amount of furniture to the global and domestic markets, but since the crisis, only 25% of their output is sold on the global market, with the rest sold domestically.

Jepara District, in Central Java, has 11,981 wooden-furniture workshops, showrooms and warehouses. The furniture industry employs about 120,000 workers, processes 0.9 million cubic metres of wood per year, and accounts for 26% of the district's economy. However, the value and volume of exports, and consequently employment, is decreasing at a rate of 6% per year. The export value fell from US\$127 million in 2005 to US\$110 million in 2012. Small and medium enterprises (SMEs) have a much weaker bargaining position than larger manufacturers such as members of the Indonesian Furniture Industry and Handicrafts Association (ASMINDO), because of their lack of industry associations and poor marketing skills, among other factors. Inefficiencies along the value chain result in over-harvesting of plantations, poor incentives for wood producers, and inefficient use of wood resources. This project undertook research and development to improve the structure and function of the furniture industry along the value chain, from the procurement of raw timber through to marketing. The key issues addressed were the lack of marketing skills, institutional capacity and value-chain efficiency.

This project contributed to the achievement of Millennium Development Goals, particularly those targeting poverty alleviation, global partnerships and environmental sustainability, by improving the wooden-furniture industry for the benefit of smallholders in Indonesia. The project also supports the transition to a green economy, as advocated at the Rio+20 summit in Rio de Janeiro, Brazil, in June 2012. The document titled "The future we want", a product of Rio+20, acknowledges the need to mainstream sustainable development at all levels. It encompasses poverty eradication, avoiding unsustainable and encouraging sustainable patterns of consumption and production, and protecting and managing natural-resource-based economic and social development (UN 2012). Environment and poverty issues are highly relevant both to the wooden-furniture industry and to forestry more broadly.

The project is linked to ACIAR's Annual Operational Plan 2012–2013 with the emphasis in the project portfolio on smallholder productivity growth, livelihoods and market integration through value-chain linkages. When the project was developed, it was linked to ACIAR's Annual Operational Plan 2007–2008, Indonesia program, in which the emphasis was on the application of agricultural policy and technical research and development to support economic growth. In forestry, ACIAR emphasises, among other things, the sustainability and capture of value from major plantation species, including acacia and teak. Among the indicative priorities for ACIAR projects in Indonesia, the project contributed to Subprogram 5: The sustainable utilisation and management of fisheries and forestry resources. In particular, the project is linked to Section 5.2. Forestry Resources on "Capturing more value from forestry plantation species through improved processing technologies and development of new products matched to appropriate markets". The program is also

linked to Subprogram 1: Improved policies to underpin agribusiness development, specifically on policy requirements for improving access for smallholders into developing markets including trading relationships and agricultural financial services.

The project also helped strengthen the contribution of forests, agroforestry and trees to production and to the incomes of forest-dependent communities and smallholders. In this regard, it is linked to Component 1 (Smallholder production systems and markets) of the CGIAR Research Program on Forests, Trees and Agroforestry: Livelihoods, Landscapes and Governance, with a primary focus on the component’s Research Theme 2 (Increasing income generation and market integration for smallholders through utilisation of forestry and agroforestry options) and Research Theme 3 (Improving policies and institutions to enhance social assets and to secure rights to forests, trees and land).

This project drew on results from an EU-funded project titled “Levelling the Playing Field”, conducted 2003–2007, in which Jepara was one of six sites in Indonesia, Malaysia and the Philippines. “Levelling the Playing Field” developed partnerships among stakeholders. In Jepara, it involved a survey of furniture producers in 2005 and facilitated the establishment of a common vision among stakeholders in the furniture industry.

The project involved some collaboration with other ACIAR projects in Indonesia, namely FST/2006/117 on wood manufacturing design, as improved design is crucial for re-invigorating the industry, and FST/2005/177 on improving economic outcomes for smallholders growing teak in agroforestry systems in Indonesia. The links between FST/2007/119, FST/2006/117 and FST/2005/177 are shown in Figure 1. As the figure shows, the outcomes of FST/2005/177 and FST/2006/117 contributed to greater availability of wood, more efficient processing and higher-quality furniture in Jepara and surrounding areas. The present project, FST/2007/119, combined these improvements with new activities to enhance the structure and function of the Jepara furniture industry.

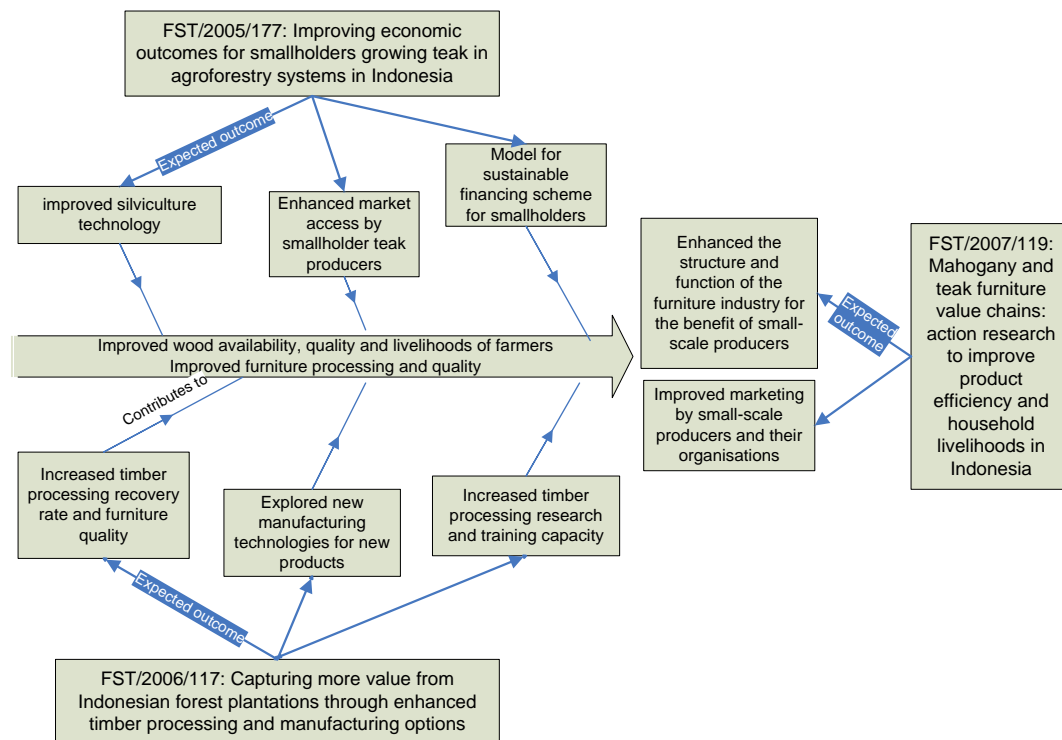


Figure 1. Links between the projects FST/2007/119, FST/2006/117 and FST/2005/177

4 Objectives

The overall aim of the project was to improve the performance of teak and mahogany small-scale furniture enterprises in Jepara. Achieving this aim required overcoming the constraints related to inefficiencies in supply and value chains, lack of direct marketing, low levels of organisation among furniture producers and limited access to finance. The objectives and activities listed below break up the body of work in a linear manner but the research team took an integrated, participatory approach. The objectives underpinning the aim are as follows:

1. To enhance the structure and function of the furniture industry for the benefit of small-scale furniture producers. Activities include the following:
 - 1.1. Supply chain and cluster analysis of teak and mahogany furniture to understand and predict wood and furniture flows
 - 1.2. Value chain analysis of teak and mahogany furniture to identify constraints and intervention points
 - 1.3. Development of multi-stakeholder processes to support the needs of small-scale furniture producers and of a comprehensive strategy for the Jepara furniture industry.
2. To improve marketing by small-scale furniture producers and their industry associations. Activities include the following:
 - 2.1. Analysis of domestic and international furniture markets, marketing networks and premium markets for small-scale furniture producers
 - 2.2. Workshops, assistance and training to help producers to adapt to market demand and certification requirements
 - 2.3. Workshops, assistance and training to strengthen producer organisations and institutions.
3. To monitor changes regarding the effects and early acceptance of innovations from objectives 1 and 2 and revise and/or reinforce project strategies accordingly. Activities include the following:
 - 3.1. Administer small-scale furniture producer livelihoods survey
 - 3.2. Develop criteria and indicators and methods for change assessment and monitoring
 - 3.3. Undertake monitoring throughout the life of the project, and feed results back into activities for each objective so that strategies can be modified.

5 Methodology

5.1 Project location

The work for this project was carried out in Jepara, an administrative district in Central Java, Indonesia. Jepara was selected because it is the centre of carved furniture in Indonesia. About one third of the furniture made in Central Java comes from Jepara, which has 11,981 business units in the industry (Figure 2) and processes an estimated 864,771 cubic metres of wood each year. Furniture making is central to the district's history and culture. Jepara's long tradition of making high-quality furniture was made possible by the region's access to premium-quality teak. Jepara is a model of a culturally rooted industry.

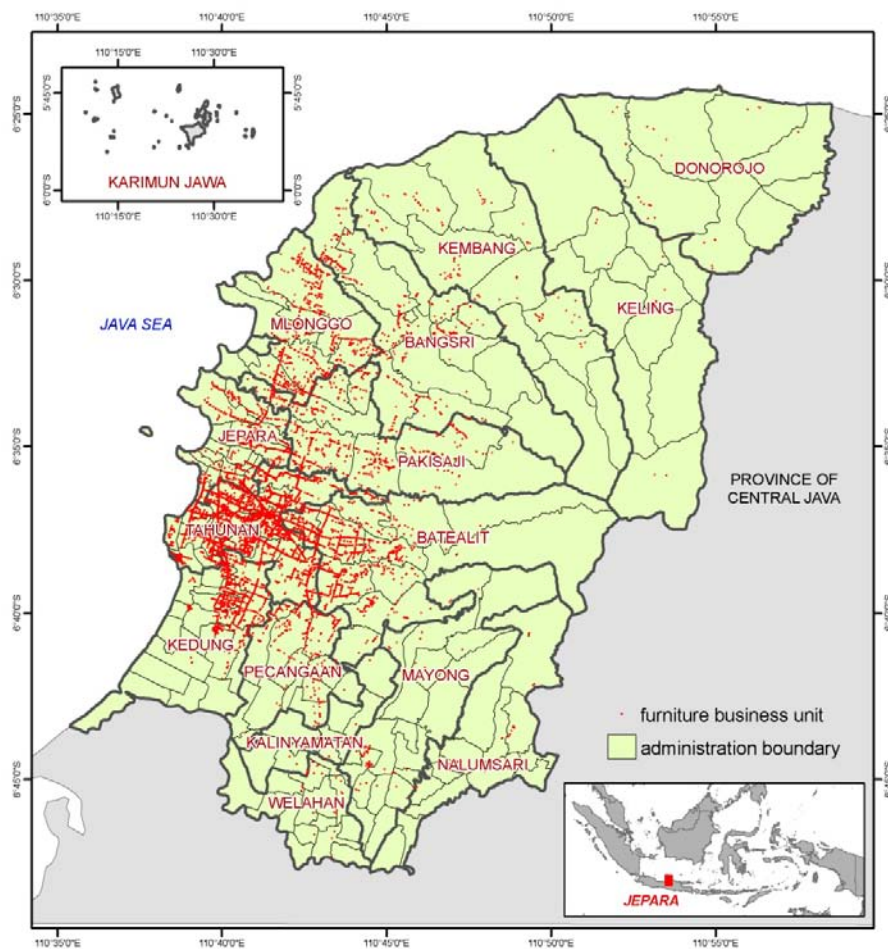


Figure 2. Distribution of furniture business units in Jepara

Jepara District covers an area of 100,413 ha, which comprises 16 subdistricts, 183 villages and 11 *kelurahan*. Java Sea lies to the north and west of the district, which borders Demak District in the south and Pati and Kudus Districts in the east. More than 95% of Jepara's administrative area is on the island of Java, with the rest scattered over the offshore islands of Karimunjawa. Jepara has a population of slightly over one million, with the numbers of men and women relatively balanced. The population density is highest in the western and southern parts of the district.

The use of teak in furniture making has long been a part of Javanese culture. Historical records dating back to the seventh century BCE¹ describe the abundance of teak forests in Central Java and the formation of skilled carpentry groups, whose members used the timber to supply items for the Kalingga, Majapahit, Demak and Mataram kingdoms. The Javanese consider teak and items made from teak to be a valuable part of their culture, a species apart from other types of wood. Local carvers and furniture producers absorbed the influences of Chinese, Indian, Arabic and European designers, producing to this day intricate designs and highly sought-after furniture. The 17th-century port city of Jepara, once a bustling centre of maritime commerce, and today remains a major centre of furniture production in Central Java.

5.2 Methods and project execution

5.2.1 Methods

Most of the work was based on value chain analysis (VCA), participatory action research (PAR), and institutional and governance analysis. VCA was used to identify the actors and their roles in adding value along the value chain (Kaplinsky and Morris 2000). A furniture value chain tracks the value added to timber as it moves from growers to furniture producers to the market. The value generated through this global partnership is the primary source of livelihood for millions of people in Indonesia (Ewasechko 2005). Through VCA, we were able to identify numerous inefficiencies along the value chain. Our use of action research ensured the project adopted a participatory approach. PAR is a process through which members of a community identify a problem, collect and analyse information, and act upon the problem to find solutions and to induce social and political transformations (Selener 1997). PAR enables researchers to understand both the problems and the changes in actors' behaviour more or less simultaneously. We applied PAR through a reflection–planning–action–monitoring loop (Henocque and Denis 2001), which refers to a set of four phases repeated until a particular condition is satisfied (Figure 3). Our aim in using PAR was to harness collective thinking and efforts to improve the position of SMEs in the value chain.

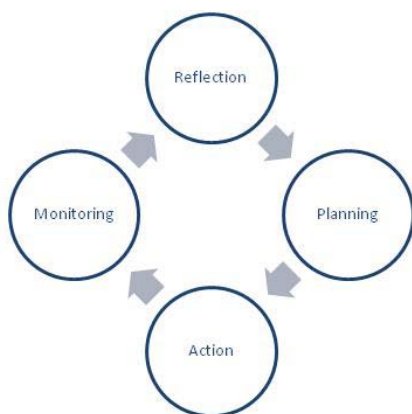


Figure 3. The four phases in the participatory action research (PAR) loop

Before the first “reflection” phase, we carried out five stakeholder consultation meetings and site visits. The aims of these activities were to identify key stakeholders and their needs, to build trust and to open up communication between researchers and stakeholders. A baseline survey was conducted to clarify the business, industry and

¹ From BC, standing for ‘Before Christ’ but for politically correct it has been changed to BCE, meaning “Before the Common Era”.

livelihood issues characteristic of furniture value chains. In the “planning” phase, plans to resolve problems and increase fairness in the value chain were designed, guided by recommendations from the reflection phase. In the “action” phase, the priority of action items in the plan was set and actions were carried out with the participation of key stakeholders.

Herr et al. (2006) proposed the use of VCA as a tool for “upgrading” the furniture industry. In this context, “upgrading” refers to a multidimensional process designed to increase the economic competitiveness of enterprises while having a positive impact on social development. The following steps were recommended: (1) initially mapping the value chain; (2) defining the areas of interest; (3) identifying the entry point for VCA; (4) planning detailed maps of particular parts of the chain; (5) carrying out the field survey; (6) evaluating the findings; and (7) developing scenarios for upgrading. In following these steps, we generated scenarios, or strategic ways to improve the furniture industry in Jepara for the benefit of small-scale furniture producers.

The third component of our research worked to influence district government policy on the furniture industry, with the aim of helping to strengthen the future position of small-scale furniture producers. We engaged in policy dialogues on the industry, interacted with key policy producers and facilitated the drafting of district regulations (*Peraturan Daerah*, known as *Perda*) to enhance value-chain efficiency and industry structure, and to achieve more equitable distribution of value addition. The project facilitated the development of a strategic plan for the furniture industry in Jepara, titled “Roadmap for the Jepara furniture industry 2013–2023”. The aim of the roadmap is to guide the development of the furniture industry in Jepara. Bappeda (the Jepara Government Planning Agency), ASMINDO, the Chamber of Commerce and Industry (KADIN), Association of Handicraft Producers and Exporters (ASEPHI), Jepara government agencies, Jepara Nahdlatul Ulama College of Design and Technology (STTDNU), Jepara Nahdlatul Ulama College of Economics (STIENU) and APKJ were the main partners for this task.

In particular, the project applied the following methods for each activity and objective:

Objective 1. To enhance the structure and function of the furniture industry for the benefit of small-scale furniture producers

- Activity 1.1. Supply chain and cluster analysis of teak and mahogany furniture to understand and predict wood and furniture flows
 - Identify and collect available GIS/spatial data on furniture workshops, warehouses, showrooms and teak and mahogany wood resources.
 - Conduct survey (using data from previous item) to complete the database on furniture and wood resources.
 - Identify sources of timber for small-scale furniture producers and the constraints on timber acquisition.
 - Identify and analyse grouping, efficiency and networking in the furniture industry.
 - Identify and predict (including scenario building) the dynamics of wood resources, furniture enterprises and efficient timber supply.
- Activity 1.2. Value chain analysis of teak and mahogany furniture to identify constraints and intervention points
 - Conduct literature review and fieldwork to identify actors along the value chain from growers to retailers and the role of women in all aspects of the chain.
 - Conduct literature review and fieldwork to identify and quantify costs and prices at each stage of the value chain; and calculate the net value-added for each actor in the chain.

- Identify and analyse the leading firms and the power relations and rules set up by those leading firms.
- Analyse constraints on small-scale furniture producers' participation in the value chain to their full benefit.
- Develop policy and intervention scenarios that will distribute value-addition activities more equitably.
- Activity 1.3. Development of multi-stakeholder processes to support the needs of small-scale furniture producers and of a comprehensive strategy for the Jepara furniture industry
 - Conduct workshops designed to strengthen the structure of the furniture industry and improve the participation and bargaining position of women as labourers.
 - Conduct workshops and find ways to help improve small-scale furniture producers' access to capital.
 - Analyse policy impact pathways and develop policy recommendations for government that support the sustainability of the furniture business.

Objective 2. To improve marketing by small-scale furniture producers and their industry associations

- Activity 2.1. Analysis of domestic and international furniture markets, marketing networks and premium markets for small-scale furniture producers
 - Design survey; determine sample size and interview methods (questionnaire, web or email survey, etc.); conduct survey and analyse the responses.
 - Identify current, potential and premium markets for Jepara furniture, including looking at market size, trends and networks.
 - Analyse constraints on small-scale furniture producers' access to premium markets.
- Activity 2.2. Workshops, facilitation and training to help producers adapt to market demand and certification requirements
 - Provide information on market networks and certification processes (verification of legal origin, chain of custody, sustainable forest management).
 - Conduct workshop to inform participants about market demand and certification requirements; develop action plan for market adaptation.
 - Stimulate self-assessment regarding certification and link furniture producers with certification bodies (e.g. TUV International) and certification capacity-building programs (e.g. Multistakeholder Forestry Program, Department for International Development United Kingdom [MFP DfID]).
 - Improve capacity to comply with certification schemes and enhance the Jepara brand.
 - Develop and maintain an interactive website for collective promotion and marketing.
- Activity 2.3. Workshops, facilitation and training to strengthen producer organisations and institutions
 - Analyse the roles of small-scale furniture producers, women in the industry and industry organisations (ability to organise, negotiate and mobilise resources).

- Conduct workshop to identify existing organisations and institutions that can channel SME interests; develop a common vision and platform for SMEs; develop a plan for strengthening the performance of SMEs.
- Assist SMEs in drafting organisational arrangements, constitution and protocols and in achieving their objectives in harmony with other furniture industry associations (e.g., ASMINDO).
- Train and assist SMEs in business management (organisation management, proposal writing, access to capital, negotiations, etc.) to help them overcome the constraints associated with operating at a small scale.
- Inform small-scale furniture producers and other key stakeholders of opportunities for adding value and distributing benefits.
- Conduct a political-economy study of the furniture industry in Jepara and Indonesia.

Objective 3. To monitor changes regarding the effects and early acceptance of innovations from objectives 1 and 2 and revise and/or reinforce project strategies accordingly

- Activity 3.1. Small-scale furniture producer livelihoods survey
 - Conduct livelihoods survey, including questions on furniture producers' incomes, liabilities and assets, and livelihood strategies.
 - Analyse data and devise scenarios for improving livelihoods based on available strategies.
 - Conduct seminar to inform policy producers of the survey findings.
- Activity 3.2. Develop criteria and indicators and methods for change assessment and monitoring
 - Conduct literature review on criteria and indicators and assessment methods.
 - Conduct workshop on developing criteria and indicators for change assessment and monitoring.
 - Develop guidelines for change assessment and monitoring.
- Activity 3.3. Undertake monitoring throughout the life of the project, and feed results back into activities for each objective so that strategies can be modified
 - Conduct focus group discussions at the furniture cluster level for participatory assessment of the indicators of change.
 - Develop feedback pathways for each project activity to increase the impacts.
 - Summarise lessons learnt on the impacts of each objective.
 - Publish project newsletter regularly.

5.2.2 Project execution

The project began with a workshop at CIFOR headquarters on 11–12 August 2008. Participants were representatives from the Ministry of Forestry, the Ministry of Cooperatives and Small and Medium Enterprises, local government agencies, Perhutani (state-owned forestry company and timber supplier), local NGOs, ASMINDO, small-scale furniture producers and other stakeholders. During the workshop, a memorandum of understanding was signed between CIFOR and the Jepara District Government, represented by the then District Head, Dr Hendro Martojo.

During the first year of the project, the focus was on understanding the Jepara furniture industry, value chains, problems and opportunities, with the team conducting several surveys and collecting data. A livelihoods survey revealed that furniture producers' incomes were generally higher than the household average. An international market survey identified seven main export destinations: France, the United Kingdom, Australia, the Philippines, the USA, Hong Kong and Spain; these seven countries account for 91% of the wooden-furniture exports from Jepara. Poor marketing skills and shortage of raw materials were identified as the main problems facing producers of wooden furniture for the export market. A survey of the domestic market revealed opportunities for Jepara's furniture industry to expand. It also found that SMEs have a weaker position in the market than bigger companies.

In the second year of the project, researchers continued to conduct surveys and value chain analyses to deepen understanding of the furniture industry. At the same time, a training needs assessment was conducted to improve manufacturers' business performance. The project facilitated the formation of the Jepara Small-scale Furniture Producers Association (APKJ); as it was then a new association with a relatively small membership, the project mapped other institutions in Jepara related to the furniture industry, defined their working rules and organisational structure, and identified linkages and APKJ's position among those institutions.

In the third and fourth years, activities were undertaken to realise the scenarios generated. The first scenario, dubbed "moving up", was implemented through various avenues, including trade exhibitions. With the support of the project, APKJ participated in several exhibitions in Jepara, Bogor (West Java), Jakarta and overseas. APKJ members practised their exhibition and marketing skills, and the project team members disseminated research findings and outreach materials. During exhibitions, APKJ promoted its products and activities with a view to accessing new markets. Activities for the second scenario, "collaborating down", were designed to increase understanding of the patterns in raw material supply and procurement and teak planting by small-scale furniture producers. Planting their own trees is an example of how the furniture producers can make use of the land surrounding their houses, as well as common land. A third scenario, "green furniture", was implemented through initiatives designed to improve efficiency in the use of wood and encourage the industry to enter certified-product markets. This involved helping furniture producers understand certification schemes and the chain of custody so that they can comply with certification requirements. In response to the introduction of the Indonesian government's timber legality assurance system (*Sistem Verifikasi Legalitas Kayu*, or SVLK), the project trained small-scale furniture producers in how to comply with the system. The project also strengthened the process of "association", for the fourth scenario, by facilitating the establishment of APKJ and building its institutional capacity. In conjunction with APKJ, the project set up and maintained a collective marketing portal, www.javamebel.com.

In the fifth year, a national symposium titled "Value chains of furniture, other forest products and ecosystem services" was held to disseminate information and research findings on the distribution of forest products and services. About 150 people took part in the symposium, with participants including directors from the Ministry of Forestry, national associations, academia, national research organisations, people in the furniture industry, Jepara government officials, stakeholders and NGOs/civil society. The development of a comprehensive strategy for sustaining the Jepara furniture industry was completed in the fifth year.

5.3 Project members and partners

This research was carried out in collaboration with the Forestry Research and Development Agency (FORDA) in Indonesia's Ministry of Forestry, the Faculty of Forestry at Bogor Agricultural University (IPB), the Jepara District Government and the University

of Melbourne. The research project formed part of ACIAR's forestry program, which aims to contribute to poverty alleviation and natural resource conservation and rehabilitation. The following people were involved in the project:

- CIFOR: Herry Purnomo, Bayuni Shantiko, Rika Harini Irawati, Sulthon, Ramadhani Achdiawan, Andrew Wardell, Bruce Campbell, Melati, Yahya Sampurna, Yayan Indriatmoko, Rubeta Andriani, Siti Juariah Nooryasyini, Zainuddin, Dina Hubudin, Dede Rohadi, Henny Linawati, Sylvia Kartika, Dhamar Adibawono, Anna Luntungan, Suci Ekaningsih
- FORDA: Rachman Effendi, Nunung Parlinah, Magdalena, Lutfi Abdullah
- Faculty of Forestry at IPB: Efi Yuliati Yovi, Dodik Ridho Nurrohmat, Bahrani

Other project partners from Jepara were the Jepara Furniture Cluster Forum (FRK), the Jepara Development Planning Agency (Bappeda), the Jepara Forestry Units and the Jepara District Government. The project office was located in the Jepara Trade and Tourism Centre building, which made research activities and stakeholder engagement easier; the district government provided the office.

Overseeing the project was a project advisory group. The group was led by Agus Djailani, an expert in the furniture industry from MFP DfID, and group members were Prof. Bambang Hero Saharjo, Dean of the IPB Faculty of Forestry; Ahmad Marzuki, Jepara District Head; Iman Santoso, FORDA Director General; Akhmad Fauzi, head of ASMINDO Jepara; Yuana Sutiyowati, adviser of the Minister of Cooperatives and Small and Medium Enterprises; Nurcahyo Adi, an independent consultant ; Andrew Wardell, CIFOR's Research Director of the Forests and Governance Portfolio ; and Herry Purnomo, a CIFOR scientist.

6 Achievements against activities and outputs/milestones

Project achievements are presented below in successive tables arranged according to project objectives and activities.

Objective 1: To enhance the structure and function of the furniture industry for the benefit of small-scale furniture producers

No.	Activity	Outputs/ milestones	Completion date	Comments	Reports
1.1	Supply chain, SWOT, cluster and scenario analyses for teak and mahogany furniture	Document on survey plan/year 1, month 2	First value chain survey conducted in November 2008	Questionnaire developed; survey data cross-checked, compiled and finalised in April 2009	a. Value chains survey questionnaire (Report 1).
		Spatial/GIS database of Jepara furniture workshops/ year 1, month 6	Updated GIS database available by November 2008	Database was previously developed by the EU "Levelling the Playing Field" project	b. Report on wood sources and constraints on timber acquisition (Report 2).
		Report on wood sources and constraints on timber acquisition/year 1, month 7	Survey on wood sources conducted in April 2009	Detailed surveys on forest stand structures carried out in Jepara in May 2009	c. Report on the efficiency and constraints study (May 2009) (Report 3).
		Report on grouping patterns, efficiency and industry networking/year 1, month 8	Report on the efficiency and constraints study (May 2009) Background paper on grouping patterns available (March 2009)		d. Background paper on grouping patterns (March 2009) (Report 4).
		Report on supply chain dynamics and future scenarios/year 1, month 10	Paper on value chain governance and scenarios submitted to the 2009 World Forestry Congress in Argentina (October 2009)	Focus on value chain governance, SWOT, leverage points and future scenarios	e. Paper on value chain governance and scenarios submitted to the 2009 World Forestry Congress in Argentina (October 2009) (Report 5).
1.2	Value chain analysis to identify constraints and intervention points	Literature review on furniture value addition and distribution/year 1, month 6	Literature review completed in January 2009	Review covers Asia and Africa	f. Literature review on furniture value addition and distribution (Report 6)
		Report on furniture actors and value addition in distribution/year 1, month 8	May 2009		g. Report on furniture actors and value addition and distribution (Report 7)
					h. Report on

		Report on leading firms, power relations, existing rules/year 1, month 10 Life stories from key furniture actors	May 2009 2008–2009	Report includes comparisons of perceptions held by global buyers and local producers Stories cover struggles, power relations and the role of government in the furniture industry; complement the surveys and other research	i. leading firms, power relations, existing rules (Report 8) Life stories from key furniture actors (Report 9)
1.3	Develop multi-stakeholder processes to support the needs of small-scale furniture producers and overcome their policy constraints	Report from workshop on strengthening the structure of the furniture industry and related action plan/year 2, month 1	Workshop on strengthening the structure of the Jepara furniture industry to face the ASEAN–China Free Trade Area (7-8 April 2010) Report on the structure of the furniture industry (April 2010)		j. Workshop report on strengthening the structure of the Jepara furniture industry to face the ASEAN– China Free Trade Area (Report 10) k. Report on the structure of the furniture industry (April 2010) (Report 11).
		Reports from workshops on value addition and related action plans	Report on value addition (2010) Workshop on capacity improvement and policy to adapt to market demand (May 2010)		l. Report on value addition (Report 12). m. Workshop report on capacity improvement and policy to adapt to market demand (May 2010) (Report 13).
		Report from workshop on improving small-scale furniture producers' access to capitals/year 4, month 10	Workshop on access to capital and entrepreneurship for APKJ members (8–9 April 2010) Workshop on access to capital and entrepreneurship for women (15–16 November 2012) Report on the cooperative establishment (2012)		n. Workshop report on access to capital and entrepreneurship for APKJ members (8–9 April 2010) (Report 14). o. Workshop report on access to capital and entrepreneurship for women (15–16 November 2012) (Report 15). p. Report on the establishment of a cooperative (2012) (Report 16).
		Report on the furniture industry policy pathway analysis/year 2, month 8	May 2010		q. Report on the

		Policy briefs on recommendations to balance value addition in distribution among furniture actors, men and women, and overcome constraints/year 2, month 8	May 2010		r. furniture industry policy pathway Analysis (Report 17). Policy briefs on recommendations to balance value addition distribution among furniture actors, men and women, and overcome constraints (Report 18).
		Workshop reports on a comprehensive strategy to enhance the furniture industry/year 4, month 6	December 2010 8–9 March 2011 28 February 2012 15–16 November 2011	A Jepara furniture industry roadmap was developed	s. Workshop reports on a comprehensive strategy to enhance the furniture industry (December 2010; 8–9 March 2011; 28 February 2012; 15–16 November 2011) (Report 19).

Objective 2: To improve marketing by small-scale producers and their organisations

No.	Activity	Outputs/ milestones	Completion date	Comments	Reports
2.1	Analyses of domestic and international furniture markets, marketing networks and premium markets for small-scale furniture producers	Survey plan/year 1, month 2	Questionnaire for international market survey (2009) Report on Jepara furniture export and marketing (April 2009)		a. Questionnaire for international market survey (Report 20) b. Report on Jepara furniture export and marketing (Report 21) c. Questionnaire for domestic market (Report 22) d. Report on the domestic market for Jepara wooden furniture (Report 23)
		Report on market demand, networks and competitors/year 1, month 6	Questionnaire for domestic market survey (2009) Report on the domestic market for Jepara wooden furniture (2009)	The study on customer preferences focused on Bogor and Jakarta because of the heterogeneity of customers and their purchasing power	e. Research report on consumer preferences: an additional analysis of the domestic market for Jepara wooden furniture (Report 24)
		Report on constraints on accessing premium markets for small-scale furniture producers/year 1, month 8	Report on consumer preferences: an additional analysis of the domestic market for the Jepara wooden furniture industry (2010)	Focus was on analysing domestic and international markets before focusing on premium market/certified furniture	

2.2	Workshops and facilitation to adapt to market demand and trends in certification	Workshop reports on market demand and certification/year 3, month 8	Workshop and training on certification (27–29 July 2010) Management training in preparing for trade exhibitions (28 September 2010)		<ul style="list-style-type: none"> f. Certification training (27–29 July 2010) (Report 25). g. Trade exhibition preparation management training (28 September 2010) (Report 26). h. Report on self-assessment for certification by APKJ “champions” (Report 27). i. Market action plan for each APKJ “champion” (Report 28). j. The project website (www.cifor.cgiar.org/furniture) was completed in December 2008, with regular updates since then.
		Report on self-assessment for certification by APKJ “champions”/year 3, month 12	May 2011		
		Market action plan for each APKJ “champion”/year 3, month 8	May 2011		
		Website in Indonesian and English for marketing products by small-scale furniture producers	Marketing portal www.javamebel.com launched in 2008	The project has raised small-scale furniture producers’ awareness of the use of Internet marketing portals and determined criteria for their participation	

2.3	Workshops, assistance and training to strengthen furniture producers' organisations /institutions	Report on the status of SMEs and on potential organisations and institutions for collaboration/year 2, month 5	2010		<ul style="list-style-type: none"> k. Report on gender in furniture value chains (February 2010) (Report 29) l. Jepara furniture industry map (May 2010) (Report 30) m. Method for obtaining spatial data to support the analysis of the furniture value chain (May 2010) (Report 31) n. Institutional survey of the furniture value chain (May 2010) (Report 32) o. Furniture and People: A Photo Journey (Dec 2009) (Report 33). p. Paper submitted to journal: "Analysis of Value Chain Governance: Scenarios to Develop Small-scale Furniture Producers" (Nov 2009), and published in 2009 (Report 34) q. Paper submitted to journal: "Upgrading Wood-based Industries: Harnessing Social Network of Small-scale Furniture Producers and Their Institutions" (Nov 2009), and published in 2010 (Report 35) r. Jepara small-scale furniture producers' training needs assessment report (May 2010) (Report 36) s. APKJ champions product catalogue, for use in the business-to-business meeting (June 2010) (Report 37) t. The political economy study (Report 38) u. Study on stakeholders and their roles (May 2012) (Report 39)
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Objective 3: To monitor changes regarding the effects and early acceptance of innovations from objectives 1 and 2 and revise and/or enhance project strategies

No.	Activity	Outputs/ milestones	Completion date	Comments	Reports
3.1.	Small-scale furniture producer livelihoods survey	Report on survey methods and sample size/year 1, month 3	Household survey completed in December 2008	Survey documents have been shared with similar projects in Nusa Tenggara (funded by ACIAR) and Africa	a. Questionnaire for household survey (Report 40) b. Report on furniture producers' livelihoods (May 2009) (Report 41)
		Report on furniture producers' livelihoods/year 1, month 6	May 2009		
3.2.	Develop criteria, indicators and methods for change assessment and monitoring	Report on criteria, indicators and method for assessment/year 5, month 1	March 2011	Considered criteria and indicators used by other ACIAR projects and partners' projects with other forest products	c. Report on criteria, indicators and method for assessment (March 2011) (Report 42)
3.3.	Undertake monitoring throughout the project and feed results back into activities under each objective	Report on monitoring of project impacts/year 3, month 4; year 4, month 4; year 5, month 4	2011 and 2012		d. Report on monitoring of project impacts (2011, 2012) (Report 43) e. Report on feedback and lessons learnt (2013) (Report 44)
		Documentation of feedback and lessons learnt from project execution/year 5, month 6	May 2013		f. News Furniture Value Chains No. 1, February 2009 (Report 45) g. News Furniture Value Chains No. 2, June 2009 (Report 46)
		Regular project newsletter (in English and Indonesian)/ starting from year 1, month 4	First English newsletter published in February 2009		h. News Furniture Value Chains No. 3, April 2010 (Report 47)

		Short movie about the struggles of Jepara small-scale furniture producers	June 2010		<ul style="list-style-type: none"> i. News Furniture Value Chains No. 4, January 2011 (Report 48) j. News Furniture Value Chains No. 5, May 2011 (Report 49) k. Info Mebel Plus+ No. 1, March 2009 (Report 50) l. Info Mebel Plus+ No. 2, October 2009 (Report 51) m. Info Mebel Plus+ No. 3, November 2010 (Report 52) n. Info Mebel Plus+ No. 4, January 2011 (Report 53) o. Info Mebel Plus+ No. 5, July 2012 (Report 54) p. Short movie about the struggles of Jepara small-scale furniture producers (June 2010) (Report 55)
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7 Key results and discussion

7.1 Results

7.1.1 Stakeholders in the furniture industry

Stakeholders in the furniture industry were identified and classified according to the following criteria: livelihood dependent on the furniture industry; having a degree of power in the furniture business; having a degree of power in policy making (e.g., government bureaucracy), having political power (e.g., political parties, allies); and knowledgeable about furniture. The stakeholders are listed in Table 1. Scoring of stakeholders against the selection criteria revealed that the four most powerful stakeholders were ASMINDO, the Office of the District Head, the District Parliament and Perhutani. Other stakeholders include community colleges (STIENU, STTDNU, SMIK), a multi-stakeholder forum (FRK), the district research council, and Lapesdam NU, an Islamic organisation.

Table 1. Stakeholders in the Jepara furniture industry

No	Institution	Abbreviation	Role	Type
1	Regional Planning and Development Agency	Bappeda	Oversee district planning	Government
2	Chamber of Commerce and Industry	KADIN	Oversee business and commercial activities	Private sector
3	Furniture Industry and Handicrafts Association	ASMINDO	Bring together large businesses in the industry	Private sector
4	Forum for Economic Development and Employment Promotion	FEDEP	Forum for discussing economic development	Multi-stakeholder forum
5	Indonesian Young Entrepreneurs Association	HIPMI	Bring young entrepreneurs together	Private sector
6	Jepara Small-scale Furniture Producers Association	APKJ	Bring small-scale furniture producers together	Private sector
7	Jepara Wood Traders Association	HPKJ	Bring timber traders together	Private sector
8	College of Economics, Nahdlatul Ulama	STIENU	Economics college	Education institution
9	College of Design and Technology, Nahdlatul Ulama	STTDNU	Furniture design college	Education institution
10	High school	SMIK	Technical school for wood craft and technology	Education institution
11	District Parliament, Commission B	DPRD Komisi B	Democratically elected representatives	Government
12	Association of Handicraft Producers and Exporters	ASEPHI	Bring together exporters	Private sector
13	Furniture Cluster Forum	FRK	Forum for discussions on the furniture industry	Multi-stakeholder forum
14	Indonesian Women Entrepreneurs Association	IWAPI	Bring together women with small businesses	Private sector
15	Industry and Trade District Office	INDAG	Implement government policy on industry and trade in the district	Government
16	Cooperatives and Small and Medium Enterprises District Office	Dinas UKM	Implement government policy on cooperatives and SMEs in the district	Government
17	Forestry District Office	Dishut	Implement government policy on forestry in the district	Government

No	Institution	Abbreviation	Role	Type
18	State-owned Forest Enterprise	Perhutani	State-owned forestry company and timber supplier in Java	Government
19	Human Resources Research and Development Agency of Nahdlatul Ulama	Lakpesdam NU	Provide a forum to give people a voice	NGO
20	District Research Council	DRD	Local research	NGO
21	Head of Jepara's District Government	Office of the District Head	Lead the local government	Government

We conducted a correspondence analysis of stakeholders to clarify the relative strength and profile of each stakeholder (Figure 4). The figure reveals clear polarisation of actors, as follows: (1) those holding political power and businesses form one group; (2) those holding power in policy making only form a separate group; and (3) those whose livelihoods depend on the furniture industry and those knowledgeable about furniture and the industry form another group. The model is fairly strong as first and second dimension cumulatively can explain 78% of data variability.

Business and SME associations, namely APKJ, HPKJ, ASEPHI and FRK, fall generally into the same group; these stakeholders rely on the furniture industry and have good knowledge about wooden furniture and handicrafts. The education institutions STIENU, STTDNU and SMIK also have good knowledge and generally depend on the furniture industry, although to a lesser degree. The DRD has good knowledge about the industry but is not directly reliant upon it.

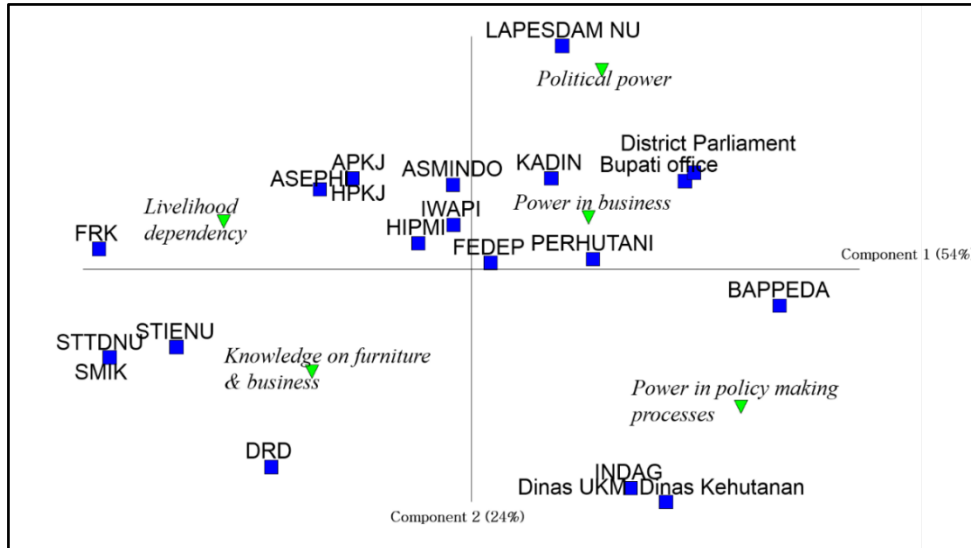


Figure 4. Correspondence analysis of stakeholders and their roles (78%)

As the industry association for large-scale furniture manufacturers, ASMINDO is dependent on the furniture industry but also has access to business and political channels. These features give this association a strategic position in terms of its knowledge of the industry and its power to influence policies. Another private sector organisation with access to business and political power is KADIN, which, interestingly, is shown to be less dependent on the furniture industry, which is only one of the organisation's interests. Clearly government bodies such as the Office of the District Head (Bupati), District Parliament and Perhutani stand in the same sphere, where they have power in business, politics and policy making. Perhutani's power in business and policy

making is related to raw materials, such as in setting prices for timber; this means that the state-owned forestry enterprise, which supplies high-quality wood (mainly teak) to the furniture industry, wields considerable influence over the furniture industry in general.

Other government bodies, namely Dinas UKM, INDAG, Dinas Kehutanan and Bappeda, form a different group as they are authorised to make policy but wield less power than the District Head and do not necessarily have access to political power. Some education institutions sit opposite the political and business power corner. The remaining stakeholders, FEDEP, HIPMI and IWAPI, are less significant in the furniture industry but they do wield some power in business and are knowledgeable about the furniture industry. Lapedam NU stands alone as holding considerable political power, based on its position as the work unit of NU, which is the biggest Islamic organisation in Indonesia, including in Jepara.

Interestingly, those with the power to influence regulations and politics are not necessarily knowledgeable about the furniture industry and their livelihoods do not depend on the industry. Therefore, when these policy makers are making laws, they will not necessarily consider the effects on the industry and those within it, with the result that regulations often neglect fundamental problems in the industry. To avoid this, policy making must involve all stakeholders, with their mix of strengths and needs. The roadmap for the Jepara furniture industry applies this principle: all stakeholders were actively involved in order to develop the concept and capture their concerns. The District Parliament and local governments are downstream in the roadmap process, as they convert the needs documented and synthesised in the roadmap into a regulation. Details study of stakeholders and roadmap development can be seen in Report 56.

7.1.2 Furniture value chain governance

Purnomo *et al.* (2009), Report 5, provide details on furniture value chains in Jepara, as shown in Figure 5. Governance between finishing companies/exporters and small-scale furniture producers is hierarchical in nature. Finishing companies, some of which own showrooms in Jepara or another city, receive instructions on furniture specifications and design from global buyers, which are often subsidiaries of overseas retailers. Exporters' decisions are usually influenced by importers and global brokers, which are in a directed network relationship with international retailers.

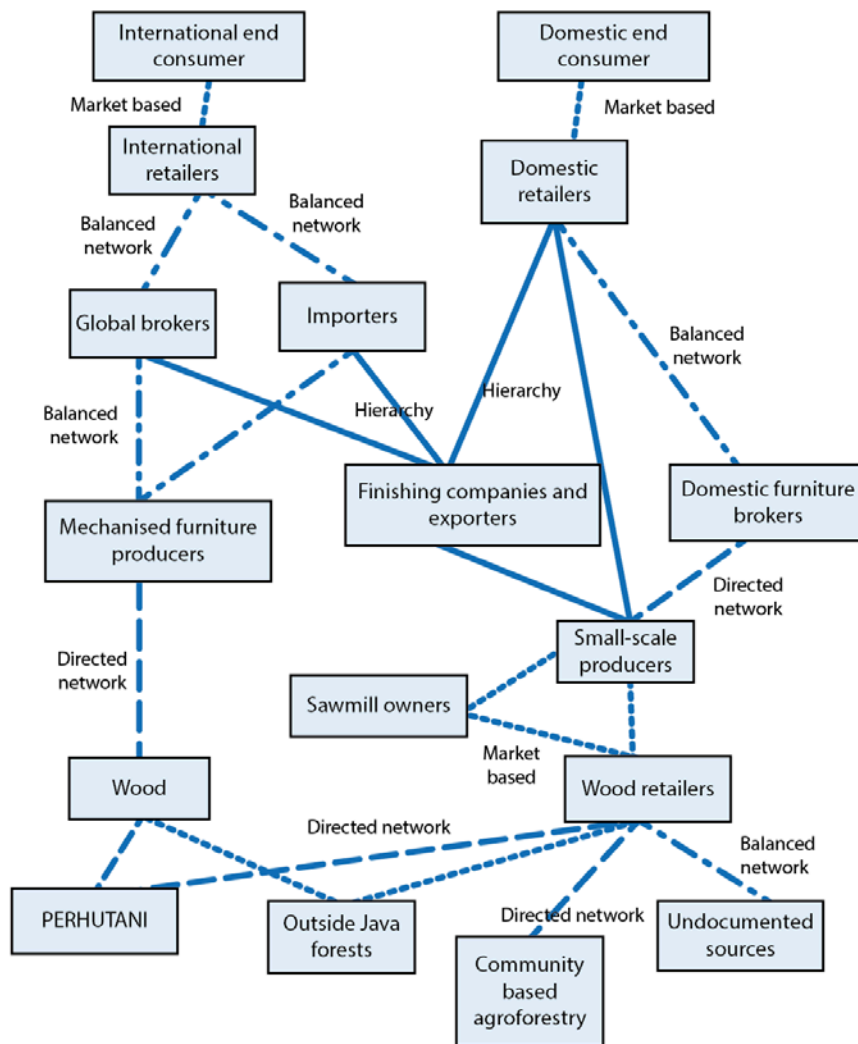


Figure 5. Position of small-scale furniture producers in value chain governance relationships in Jepara (Purnomo *et al.* 2009)

Small-scale furniture producers, Figure 5, were the focus of the study. They are in a directed network with domestic brokers. That is, brokers are furniture producers' main customers, taking more than 50% of their products, but they can easily shift from one furniture producer to another. Governance between exporters and small-scale furniture producers also is a directed network.

The governance relationships between small-scale furniture producers and sawmill owners and wood retailers are market-based. Transactions and prices are not regulated and small-scale furniture producers can freely buy wood from retailers. Those without sufficient funds take loans from closer wood retailers. They are also free to choose the sawmill for their logs. By contrast, the relationship between wood retailers and tree growers is a directed network.

Fauzan and Purnomo (2012), in Report 57, suggested that this type of value chain could change in response to the global crisis. Value chain dynamics, which could take the form of a reduction in the number of suppliers, identification of new markets, changes in products or product quality or a shift in partners, are necessary for the survival of all those in the value chain.

Research on the furniture actors and value chain distribution (Report 7) was used to identify the constraints and intervention points for future activities. These weaknesses or

constraints related to inefficiencies in supply and value chains, lack of direct marketing, low levels of organisation among furniture producers and limited access to finance.

Efforts to upgrade the position of SMEs in the value chain has vertical and horizontal dimensions, where the vertical dimension concerns different stages along the chain and the horizontal dimension is related to changes within a stage of the value chain (Herr *et al.* 2006). For the vertical dimension, Purnomo *et al.* (2009) suggest three upgrading scenarios: “moving up”, “collaborating down” and “green furniture”. The “moving-up” scenario encourages small-scale furniture producers to move up to higher stages in the value chain, to function as furniture brokers or finishing companies. The “collaborating-down” scenario supports wood supply security by encouraging furniture producers to collaborate with wood traders and tree growers. For example, some SMEs in Jepara have started to grow their own teak to secure their future supply of timber, which means that the PAR in this study also led to actors in the chain undertaking activities to store carbon. The “green furniture” scenario encourages the production of eco-labelled furniture from certified timber.

The suggested upgrading scenario for the horizontal dimension was the establishment of an industry association for small-scale furniture producers (Purnomo *et al.* 2009). In this scenario, small-scale enterprises are assisted to form local organisations and collectively gain access to financial institutions and markets. Associations are more effective than individuals in organising marketing channels and negotiating prices, and thus have a stronger position for challenging exporters and brokers.

7.1.3 Results of the participatory action research (PAR)

The four upgrading scenarios were captured during the PAR, which involved three loops, as summarised in Table 2. Descriptions of these PAR processes and the results will be published in a special issue of the journal *Forests, Trees and Livelihoods* (Report 58).

Table 2. Key activities and results in the PAR processes

PAR process	1 st loop (2008–2009)	2 nd loop (2009–2010)	3 rd loop (2010–2012)
Reflection	Multi-stakeholder workshop to discuss problems and collaborative actions	Coordination meeting to analyse the 1 st loop	Coordination meeting to analyse the 2 nd loop
Planning	Planning of surveys on business units, livelihoods and markets	Planning of value chain and social-network studies and follow-up	Sharpening of the four scenarios based on plans
Action	Participatory surveys and sharing of results Establishment of APKJ and its secretariat Participation in trade exhibitions in Jakarta	Research and sharing of results of value chain analysis and social network analysis Training on adapting to market demands and challenges posed by the China–ASEAN Free Trade Agreement Participation in trade exhibitions Development of marketing portal Training on finances and management Training on wood drying and enhancing product quality	Research on community teak plantations and carbon storage in furniture and sharing of results Training in chain of custody certification Participation in trade exhibitions Planting 1000 teak trees Roadmap policy workshops Scaling-up of APKJ to a national community Training of women in sanding and entrepreneurial skills Annual meeting of APKJ
Monitoring results	Improvement in capacity of local researchers (conducting surveys) Increase in income of local	Improvement in networking among small-scale furniture producers and increase in business contacts with buyers	Increase in income of local furniture producers Improvement in social networking

	furniture producers Establishment of APKJ as a forum for small-scale furniture producers	Improvement in product quality Increase in income of local furniture producers Social and political recognition of APKJ	Improvement in environment Improvement in APKJ
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Results from the first PAR loop (2008–2009)

The “reflection” phase in the first loop was framed as a workshop with 37 participants (including co-researchers) to capture the current situation of the Jepara furniture industry. In the “planning” phase, a 1-year plan was developed, with activities focused on assessing the results of the VCA and conducting collaborative surveys and studies on furniture business units, livelihoods, the value chain and markets. The “action” phase, in which the collaborative surveys were conducted, was a learning process for all members of the project team. In particular, the survey on furniture workshops determined the efficiency of small-scale furniture producers and identified the constraints on their business performance. The survey revealed that many owners of furniture workshops did not know how to calculate their profits and none of them kept financial accounts. The small-scale furniture producers noted that they needed an industry association through which they could increase their market access, enhance their design skills and product quality, and improve their access to credit. They called for training in management, marketing and design. All Jepara stakeholders were informed about the four VCA scenarios of “moving up”, “collaborating down”, “association” and “green furniture”, and they supported the actions associated with each scenario.

The aim of the livelihoods surveys, conducted at the beginning and near the end of the project by researchers assisted by local actors, was to gain an overview of the industry and an understanding of livelihood strategies in Jepara, especially of people who live in areas reliant on the furniture industry. The questionnaire elicited information on demographics, assets, income sources (i.e., agriculture, forestry, trade, wages, furniture making) and respondents’ perceptions of the furniture industry. Fifteen villages were chosen from seven sub-districts. A systematic random sampling method was then used to select 30 households in each village. Findings revealed that incomes of furniture producers are usually about 30% higher than the average; those in urban and semi-urban areas have various sources of income.

In line with the findings from the VCA, all stakeholders supported the industry association scenario; an association was requested through the survey. APKJ was then established with representatives of small-scale furniture producers from seven sub-districts in Jepara. They formulated its vision as follows: (1) improve the power of small-scale furniture producers; (2) be independent and competitive in the global market; and (3) empower the members of APKJ to achieve prosperity and to advance the Jepara furniture industry. Eleven people were elected to form a task force to formulate the APKJ statutes and protocols, and organise the first APKJ congress. Once established, APKJ participated in furniture trade exhibitions in Bogor and Jakarta.

In the “monitoring” phase, we observed that membership in APKJ improved cohesion among small-scale furniture producers, and that the association functioned as a forum in which they could interact, improve their influence and set targets. APKJ sought also to represent its members’ interests in negotiations with other associations such as ASMINDO and HPKJ. As of April 2012, 126 small-scale furniture producers had joined the APKJ, with more set to follow suit. Each APKJ member is a representative of a furniture group, sub-village and cluster. The local Jepara government recognised APKJ and committed to funding its appearance in future furniture fairs and exhibitions. ASMINDO also acknowledged the importance of APKJ as a forum for improving producers’ capacity to manufacture better-quality furniture, for fixing their business management practices and cost–benefit calculations, and shortening their delivery times.

Results from the second PAR loop (2009–2010)

In the “reflection” phase of the second loop, the project team reviewed the results from the first loop and found them to be encouraging; however, no positive impact on the livelihoods of local furniture producers was observed. The results of the PAR to date were reviewed and communicated to all stakeholders in Jepara. Participants in the meeting evaluated the first-year PAR activities, planned the second-year activities and conducted a half-day field trip to furniture workshops around Jepara. The meeting also involved a session to devise new strategies to secure the sustainability of APKJ.

In the “planning” phase, a 1-year plan for the second loop was developed. Activities planned were social-network and institution surveys as well as training and capacity building. During the “action” phase, social-network surveys were conducted in conjunction with the institutional survey. A training-needs assessment was carried out to guide the development training that would give small-scale furniture producers the necessary skills to improve their business performance. Training to improve small-scale furniture producers’ financial management skills was conducted in collaboration with Bank Rakyat Indonesia (BRI), STIENU and the Academy of Wood Science in Semarang, the capital of Central Java Province. Following the financial management training, several of the furniture producers succeeded in securing low-interest loans from BRI. We conducted another workshop on improving capacity and developing policies to respond to changes in market demand, and we informed participants about consumer behaviour, based on findings from the domestic market survey. In particular, the survey showed that most furniture buyers are women, who are therefore highly influential in any decisions on buying furniture. The survey results also suggested that word of mouth was the most effective form of marketing, followed by online marketing.

The aim of the workshop on the structure of the furniture industry was to build understanding not only of the industry structure but also of the challenges associated with the China–ASEAN Free Trade Agreement. Results showed that, to survive the threat associated with the free trade agreement, the Jepara furniture industry must improve its efficiency and product quality, and secure support from the government at all levels.

As part of the “moving-up” scenario, the project team facilitated APKJ’s participation in exhibitions at the CIFOR Annual Meeting, the Indonesia Trade Expo and the Small-scale Enterprise Exhibition. During the exhibitions, APKJ members sold products, attracted buyers, forged some business contracts, and improved business networks.

In the “monitoring” phase, we found that the establishment of APKJ had increased networking among small-scale furniture producers and strengthened their voice in social and political arenas in Jepara. APKJ created a forum where members could discuss issues related to their business, livelihoods and future. In the political arena, the government considered APKJ to represent the voice of small-scale furniture producers at business and policy events. APKJ activities have also contributed to improving the natural environment and training in quality enhancement and self-made kiln drying technology led to improved furniture quality and durability.

Results from the third PAR loop (2010–2012)

In the “reflection” phase, we evaluated the results from the second loop of the PAR. All stakeholders agreed that the PAR processes had been successful but, for the project to have an impact beyond its end date, more work was needed, particularly on furniture certification (“green furniture” scenario), trade exhibitions (“moving-up” scenario), scaling-up of APKJ, securing raw materials (“collaborating-down” scenario) and redressing gender imbalances. Therefore, in the “planning” phase, all stakeholders agreed to undertake these tasks, which were basically in line with the four scenarios established.

In the “action” phase, we developed a training seminar on chain of custody certification, which was held by APKJ in collaboration with the Indonesian Export Training Centre of the Ministry of Trade. Thirty APKJ members participated in the training seminar, which aimed

to raise their awareness of chain of custody certification. Following the training, each “champion” (key APKJ members who are actively involved in managing the association) carried out a self-assessment.

The project team also conducted a study of the SVLK (Indonesia’s timber legality assurance system), which was set up by the Indonesian Ministry of Forestry and Ministry of Trade; compliance with the system became mandatory from 21 December 2011 (Ministry of Forestry Regulation P. 68/Menhut-II/2011). Some APKJ members applied for SVLK certification, either individually or as a group. One APKJ member who applied as an individual obtained SVLK certification; nine other members who formed a group obtained SVLK certification in June 2013.

APKJ participated in exhibitions at the Jepara Expo, hosted by the government of Jepara. In addition, APKJ managed two booths in an Export Products Exhibition at the Jakarta International Expo and joined the International Furniture and Craft Fair Indonesia in Jakarta. APKJ members gained practical experience in interacting directly with international buyers at these exhibitions.

The project team further strengthened the process of “association” by supporting the annual meeting of APKJ. During the workshops between APKJ and other small-scale organisations from Central Java, we agreed to facilitate the development of the Indonesia Furniture Producers Community (KPMN). APKJ also manages a marketing portal at www.javamebel.com. Specific training for women was conducted to equip women in the industry with sanding and entrepreneurial skills.

In the “monitoring” phase, we noted that the chair of APKJ had been invited to a national seminar and was mentioned in local newspapers. APKJ’s booths at the Indonesian Export Products Exhibition and at the International Furniture and Craft Fair Indonesia promoted the products of its members, introduced APKJ and its activities, and opened access to new markets. In all exhibitions, the collective online marketing portal was promoted.

In addition, APKJ, as an association, was invited to several international events. Local furniture producers Zaenudin and Legiman represented APKJ and, with the support of the project, went to the International Wood Culture Society meeting in India in November 2011 to present a report on the APKJ and promote their products. In 2012, APKJ, again represented by Legiman, participated in the International Live Wood Carving Show and Competition China–ASEAN, held in Nanning, China, on 16–26 November. Just recently, Mr Latief, as a representative of APKJ, was invited to London to present his experiences in successfully applying for certification under Indonesia’s SVLK as an individual.

7.1.4 Policy work (2010–2013)

To support policy formulation, the project facilitated the development of a strategic plan for the furniture industry in Jepara, titled “Roadmap for the Jepara furniture industry 2013–2023”. The aim of the roadmap is to guide the development of the furniture industry in Jepara. Bappeda, ASMINDO, KADIN, ASEPFI, Jepara government agencies, STTDNU, STIENU and APKJ were the main partners for this task. The roadmap was developed through five consecutive workshops, which we held in such a way as to ensure all stakeholders could express their true interests.

The aim of the first workshop, held on 23 December 2010, was to share ideas about different institutions’ policies on the furniture industry, on the premise that understanding current policy is the basis for making improvements for the future. During the one-day workshop, presentations were given by representatives of Jepara government institutions (Bappeda, the Industry and Trade District Office and the Cooperatives and Small and Medium Enterprises District Office), Perhutani, KADIN, ASMINDO and APKJ. Each presentation was followed by a discussion, with a general discussion at the end of the workshop.

The aim of the second workshop, held on 8–9 March 2011 and attended by 36 people, was to collect and analyse information from actors with different interests and come up with policy solutions. An APKJ representative moderated the workshop. Participants shared their ideas and raised questions and comments. An official from Bappeda elaborated on the vision for Jepara for 2030 and on the national roadmap for the furniture industry 2010–2014. Given the absence of a district roadmap at that stage, the workshop made an extremely important contribution to strengthening the Jepara furniture industry. A researcher from CIFOR outlined possible methods for developing a roadmap.

The aim of the third workshop, held on 13 July 2011, was to discuss the structure and content of the roadmap. Members of the project team and FORDA presented ideas on the roadmap, which was followed by questions and answers. The Jepara District Head attended the workshop and gave his feedback, saying that the idea had his full support, as the roadmap could be the basis for the future development of the furniture industry. With their input facilitated by members of the project advisory group, workshop participants suggested that the roadmap should adopt a local orientation, rather than a national perspective. The structure for the roadmap was then agreed as follows: introduction, the current situation, projection for the next 10 years, ideal conditions, and action plans to achieve them. In other words, the roadmap tried to respond to the following questions: (1) Where are we today? (2) What can be expected to happen if current conditions continue? (3) Where do we want to go? (4) How are we going to get there? This structure is depicted in Figure 6.

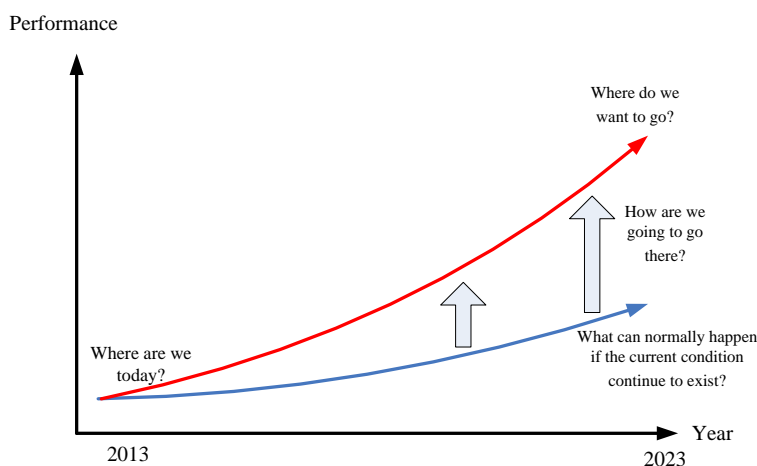


Figure 6. Conceptual structure of the roadmap

The aim of the fourth workshop, held on 17 November 2011, was to discuss the draft roadmap and finalise it. A representative from Bappeda welcomed the participants, who expressed their appreciation of the structure and content, especially that it was locally relevant and accurate. Furthermore, a representative of the Central Java Forestry Unit spoke on the potential of using fast-growing super-teak species (*Jati Unggul Nusantara* or JUN) for raw material, and suggested that those in Jepara should collaborate with tree farmers outside Jepara, such as in Wonogiri (Central Java). A representative from STIENU noted the importance of kinship relations and the informal management of furniture as well as the need for government support for the furniture industry. A representative from STTDNU suggested opening the roadmap to public consultation, integrating it with existing plans, seeking financial support for small-scale furniture producers from private and state-owned companies as part of their corporate social responsibility programs, diversifying their raw materials and adding more creative touches to furniture products. The chair of ASMINDO expressed his pride in the roadmap, saying he would take the idea to the national level. Members of the project team and APKJ noted

all suggestions for the draft roadmap and worked together to improve it and offer it for public consultation in early 2012.

Consultation with the public took place on 28 February 2012 in an event aimed at raising public awareness of the roadmap and to identify the most suitable public policy vehicle for it, that is, as a district regulation (*Perda*), or as a District Head regulation (*Peraturan Bupati* or *Perbup*). A representative of Bappeda opened the forum by acknowledging the positive impact that the roadmap could have on Jepara, noting, however, a need to clarify the targets of the roadmap and when they would be achieved. He mentioned that the roadmap would be used for reference for another medium-term district development plan. Next, the project team presented the overall roadmap and sought feedback from participants. Stakeholders generally expressed satisfaction with the proposed roadmap and made suggestions for revisions. During the discussion, it was agreed that the roadmap would be most appropriate as a *Perbup*, which has a shorter process as it issued by the District Head. By contrast, although a *Perda* might be more powerful, it would require parliamentary approval, which would take longer and the outcome would be uncertain. The public welcomed the idea of a *Perbup*, with Bappeda designated as the focal point for the process.

The final roadmap was officially submitted to Bappeda on 29 February 2012 at the Bappeda office. At that time, Bappeda mentioned the possibility of a delay in the *Perbup* process because of the election of a new Jepara District Head, who would come into power only after being formally inaugurated. To ensure the longevity of the roadmap and ongoing political commitment, we preferred that the roadmap be given to the incoming leader.

We met with the newly elected Jepara District Head and high-ranking staff from his office to discuss the roadmap on 13 August 2012. Members of the project team and APKJ described the process of developing the roadmap. The District Head acknowledged the value of the work and promised to incorporate the roadmap into his government's policies. He requested that the roadmap be completed with yearly targets and that indicators be made clearer to ensure the government of Jepara could execute the action plan easily.

A focus group discussion with key members of the Jepara furniture industry was held on 20 September 2012 to determine yearly targets for the next 10 years and to identify appropriate indicators for measuring them. Another topic of discussion was how the roadmap would be made into a *Perbup*, as it had to be formulated as a legal decree in collaboration with the Office of the District Head.

The District Head and representatives of Bappeda met with members of the project team on 10 January 2013 to discuss the roadmap and its developments as well as opportunities to integrate the roadmap into Jepara government policy. Members of the project team explained that the action research had been conducted since 2009 in collaboration with Jepara small-scale furniture producers and other stakeholders, including the district government, KADIN, ASMINDO and local colleges, and that participants in workshops and focus group discussions had urged that the roadmap be proposed as a *Perbup* to give it stronger authority. During the discussions, a representative from Bappeda put forward the pros and cons of making the roadmap a *Perbup* or *Perda*. The director of the economy division at the Office of the District Head reiterated the importance of the furniture roadmap as a basis for further development and said it must become a *Perda* to ensure it receives an appropriate budget, possible only under the jurisdiction of the parliament. At the meeting, it was concluded that the roadmap should be proposed as a *Perda* rather than as a *Perbup*, as that would give it greater authority and a longer life. The District Head suggested that the project team request a hearing with the Jepara Parliament.

The project team was invited to a hearing with the Jepara Parliament to present the roadmap ("Roadmap on the Jepara furniture industry 2013–2023") on 4 February 2013. The hearing was led by co-chair of the House of Parliament and involved members of

Parliamentary Commission B on Economics and Industry, local government and local media outlets. At the end of the discussion, the chair offered the following five conclusions: (1) On behalf of the people of Jepara, the Parliament expressed its appreciation and gratitude to CIFOR for its research in Jepara, as documented in the Roadmap on the Jepara Furniture Industry 2013–2023; (2) the Parliament asked that the local government follow up recommendations in the roadmap and discuss them with local stakeholders; (3) the Parliamentary Chair gave a mandate to Commission B to discuss recommendations in the roadmap with the local government; (4) Parliament will formulate the roadmap as a House Initiative District Regulation in 2013 (Perda Inisiatif); and (5) Parliament requested that the local government incorporate actions in the roadmap into the local government action plan.

On 26–28 February 2013, the project team received a courtesy visit from 12 members of the Jepara District Parliament, who were interested in learning more about forests and the local furniture industry. The delegates expressed their appreciation for CIFOR's work on the furniture value chain in Jepara, supported by ACIAR and partnered by IPB and FORDA, particularly for the industry roadmap. The delegation was led by the Deputy Parliamentary Chair and Chair of the Economic Commission.

During the fifth annual meeting for the project, the project team and stakeholders had a lively discussion on how to guarantee that the roadmap would indeed be converted into a Perda in 2013. Mr Ja'far, Deputy Chairman of the Jepara Parliament, said that members of parliament had been involved in the formulation of the roadmap and were committed to taking it through the legislative process. A recommendation from the meeting was to establish a small taskforce to foster this process and assist with the academic draft and legal drafting. A similar process was followed for occupational health and safety (OH&S) in the furniture industry, which was led by a team from IPB (Report 59). Parliament took responsibility for ensuring that both the roadmap and OH&S were formalised as Perda and implemented in Jepara.

Following recommendations during the final project review, CIFOR, FORDA and IPB are continuing to assist local stakeholders in the legal drafting of the roadmap and OH&S Perda. The roadmap academic draft has been sent to IPB for comments, as well as to the District Parliament. We are committed to monitoring the implementation of these Perda once they are operational.

7.1.5 Training

Nine training events for people in the local industry were held as part of the project. The training covered production, financial management, marketing, image editing and certification. Details of the training activities are given in Table 3. APKJ was also invited to undertake training conducted by the government, KADIN, the UK Department for International Development (DfID), ACIAR project FST/2006/117 and others (Table 4).

Table 3. Training activities conducted as part of the project

No	Topics	Aim	Method	Target participants	Number of participants	Facilitators
1	Quality control: (a) quality standards, (b) wood-drying techniques, (c) making simple drying kilns (8 April 2010)	To equip small-scale furniture producers with professional quality-control standards in furniture making	In-class theory, discussion and practice	Small-scale furniture producers, members of APKJ	20	Academy of Wood Science

2	Financial management: (a) accessing and managing bank loans, (b) calculating costs, (c) managing financial matters (9 April 2010)	To equip small-scale furniture producers with financial management skills	In-class theory, discussion and practice	Small-scale furniture producers, members of APKJ	20	Bank Rakyat Indonesia (BRI), STIENU and Academy of Wood Science
3	Chain of custody certification (27–29 July 2010)	To furnish small-scale furniture producers with knowledge on certification and the motivation to comply	In-class theory, discussion and practice	Small-scale furniture producers, members of APKJ	27	CIFOR in collaboration with the Indonesian Export Development and Training Centre of the Ministry of Trade
4	Exhibition management (28 September 2010)	To equip small-scale furniture producers with skills in exhibition management, negotiations and business communications	In-class theory, discussion and practice	Small-scale furniture producers, members of APKJ	30	Aris Darujo, Senior Industry Advisor at Development Alternatives Incorporation, USAID SENADA project
5	Management and motivation training for small-scale furniture producers (3–4 October 2010)	To motivate small-scale furniture producers to succeed and to improve their social and organisational skills	In-class theory, discussion and practice	Small-scale furniture producers, members of APKJ	15	FORDA and professional business trainers
6	Furniture finishing and entrepreneurialism (11–12 May 2011)	To equip women with furniture-sanding and entrepreneurial skills	In-class theory, discussion and practice	Women workers in the Jepara furniture industry	30	IWAPI, STTDNU and APKJ
7	Entrepreneurialism for women (15–16 November 2011)	To improve women's entrepreneurial and financial management skills	In-class theory, discussion and practice	Women workers in the Jepara furniture industry	30	IWAPI, PT Jasa Marga Central Java, Ririn Wulandari, (lecturer at Perbanas)
8	Carving and design training for women (28 February, 1 March 2012)	To improve women's furniture design and carving knowledge	In-class theory, discussion and drawing practice	Women workers in the Jepara furniture industry	30	IWAPI and APKJ
9	Image editing (18 April 2012)	To give basic instruction in Adobe Photoshop	In-class theory, discussion and drawing practice	APKJ members	21	APKJ and CIFOR

Table 4. Training events in which APKJ members participated

No	Topics	Aim	Method	Target participants	Number of participants	Facilitators
1	Training on design development (18–22 July 2011)	To improve design skills	In-class theory, discussion	Small-scale furniture producers	25 (8 APKJ members)	Ministry of Trade and Industry
2	Training on exhibition preparation (October 2011)	To improve skills for participating in exhibitions and following up	In-class theory, discussion and practice	Small-scale furniture producers that participated in PPE exhibition	20 (2 APKJ members)	Central Java Department of Industry and Trade
3	Marketing assistance for SMEs in Jepara and financial management and funding (26 November, 17 December 2011)	To improve marketing and financial management skills	In-class theory, discussion and practice	Small-scale furniture producers	26 (8 APKJ members)	Jepara Chamber of Commerce in collaboration with GIZ (German Agency for International Cooperation)
4	SVLK training (19–20 February 2012, 27–29 April, May 2012)	To inform participants about SVLK certification procedures	In-class theory, discussion and practice	Small-scale furniture producers	30 (15 APKJ members)	SUPHEL (Community solidarity in preserving forest and environment) and MFP (Multistakeholder Forestry Programme) of DfID UK
5	Wood preservation training (8–9 March 2012)	To inform small-scale furniture producers about wood preservation	In-class theory, discussion and practice	Furniture producers	30 (15 APKJ members)	ACIAR project FST/2006/117
6	Training on production: Tools (JIG) for spindle moulder and circular saw (30 June–1 July 2012)	To improve participants' furniture-making skills	In-class theory and practice	Furniture producers	30 (15 APKJ members)	ACIAR project FST/2006/117
7	Improving performance of the furniture and timber industry in Central Java (19 July 2012)	To improve understanding and build capacity	In-class theory and discussion	Furniture producers	40 (4 APKJ members)	Central Java Department of Industry and Trade
8	Training in kilns and drying (24 September 2012)	To demonstrate the kiln and drying prototype	Practice	Furniture producers	30 (15 APKJ members)	ACIAR project FST/2006/117
9	Furniture design training (17–29 October 2012)	To improve participants' design skills	In-class theory and practice	Furniture producers	25 (2 APKJ members)	Jepara Office of Industry and Trade

7.1.6 Follow-up of recommendations made in the final review

In the last year of the project, ACIAR conducted a final project review. Glen Kile, an independent consultant, and Sri Nugroho Marsoem from the Faculty of Forestry of Gadjah Mada University, visited Jepara on 18–19 June 2013, with Tony Bartlett, the ACIAR Forestry Research Program Manager (for one day of the visit), and Fiona Wyborn, the ACIAR Forestry Program Support Officer. The review team met with members of APKJ, ASMINDO, KADIN, several Jepara District government agencies, members of the Jepara District Parliament, including the Speaker and Deputy Speaker and Chairs of Parliamentary Commissions, and the Jepara District Head. They also visited a demonstration teak plantation and met with a cross-section of small-scale furniture producers involved in the project as well as some log traders.

Following the field trip, a formal all-day project review meeting was held at CIFOR on 21 June, with key members of the project team and institutional leaders: Bambang Hero Saharjo and Evi Yulianti Yovi from IPB; Achmad Pribadi, Rachman Effendi and Nunung Parlinah from FORDA; Herry Purnomo, Ramadhani Achdiawan, Bayuni Shantiko, Sultan M Amin, Rika Harini Irawati and Yahya Sampurna from CIFOR; and Peter Kanowski (Deputy Director General of CIFOR), Andrew Wardell (Director of CIFOR's Forests and Governance Portfolio), ACIAR Forestry Research Program Manager Tony Bartlett and ACIAR Forestry Program Support Officer Fiona Wyborn.

The project review document can be seen in Report 60. The review resulted in 10 recommendations, which are listed in Table 5 along with the follow-up.

Table 5. Recommendations from the project review and follow-up by the project team

Recommendation no.	Description	Project follow-up
1. Recommendation (Section 2 Impact)	The project team should consolidate the impact assessment studies using business and social indicators into a single project report and supplement with any quantitative impact data that might be available.	We have prepared a consolidated paper on the impact assessment to include business and social indicators supported (Report 43).
2. Recommendation (Section 2 Impact)	Project outcomes should be summarised in the final report in a project objectives by action strategy table.	We have summarised the project outcome for each project objective and linked them to the action strategies as part of the impact section in this final report.
3. Recommendation (Section 2 Impact)	The project team provide whatever assistance they can in the remaining life of the project to APKJ to develop a more complete business plan for life beyond the project.	We have consolidated the existing APKJ business plan, as in Report 61
4. Recommendation (Section 2 Impact)	The project team completes the development of a training manual for use by APKJ and technical education providers.	We have developed the training manual (Report 62)
5. Recommendation (Section 2 Impact)	CIFOR and other project participants (IPB/FORDA) consider how they might be involved in assisting /monitoring the implementation of the two Peraturan Daerah (Perda).	We have discussed this with our partners. IPB is drafting an Occupational Health and Safety section for the Perda. CIFOR and FORDA are assisting in drafting the Perda for the Jepara roadmap. CIFOR, FORDA and IPB have agreed to monitor the implementation of the Perda once they are issued.

Recommendation no.	Description	Project follow-up
6. Recommendation (Section 3 Project execution)	ACIAR consider in the design of future projects balancing the need to encourage capability development in Indonesia (or in country) versus the contribution of overseas postgraduates.	In new ACIAR concept notes we discuss balancing development capacity for Indonesia (or in country) and overseas postgraduate students.
7. Recommendation (Section 3 Project Execution)	ACIAR review the basis for collaborative arrangements between projects working in the same geographical area/ same stakeholder base to ensure maximum synergies and consistent impact assessment methodology.	In new ACIAR concept notes, we discuss strengthening collaboration between the proposed project and existing ACIAR projects.
8. Recommendation (Section 3 Project Execution)	The project team considers how discoverability/ access can be maintained to the key project outputs beyond the life of the project.	We have inserted URL links from the project website to all postgraduate theses resulting from students' involvement in the project (see http://www.cifor.org/furniture/publications/thesis-and-dissertation.html)
9. Recommendation (Section 4 Lessons learned)	The project team consolidates material on lessons learned into a single document or checklist.	We have developed a single checklist of lessons learnt (Report 44)
10. Recommendation (Section 5 Follow-up/Future R&D)	In terms of value chain research any further studies should focus on aspects of the planted log supply chain as well as comparative studies of furniture value chains in other Indonesian furniture centres or in other ASEAN countries and the opportunities to improve the welfare and livelihoods of small-scale producers	CIFOR has been corresponding with the ACIAR forestry program manager on these recommendations through draft concept notes. The first concept note focuses on the plantation timber supply chain; the second concept note provided a framework to conduct comparative studies of furniture value chains in the ASEAN region with the aim of improving the welfare and livelihoods of small-scale furniture producers.

7.2 Discussion

7.2.1 Approach

Researchers from CIFOR, FORDA and IPB worked to help stakeholders to recognise and categorise their problems and suggest solutions. By turning stakeholders into co-researchers, the PAR made them explore possible solutions by providing space for them to understand the problem and express their concerns and interests. That is, through their involvement in surveys, stakeholders were required to research their own problems and challenge their existing standpoints. The survey processes and results triggered changes in mindsets. Initially, this evoked some tension – and surprise – from the larger furniture producers; for example, larger companies exhibited some negative reactions. However, the negativity dissolved once they understood how improving the performance of small-scale furniture producers was necessary to sustain the Jepara furniture industry as a whole, and that improving the smaller players could strengthen the larger companies, because the latter buy SMEs' products.

The VCA revealed the position of furniture SMEs and indicated ways to improve their value-added. The PAR was carried out in Jepara in response to requests from the local government for intervention and support. The project team communicated information intensively with all stakeholders, as required for mutual understanding and to change behaviour. Both the VCA and the PAR were designed to be gender sensitive by engaging

women in all PAR processes and considering women's particular circumstances, including their primary responsibility for providing food for the household and education for their children (Agarwal 2010; Purnomo et al. 2011).

During the research, the strengths and weaknesses of the PAR became apparent. Its strengths are its multi-stakeholder and participatory approach, its ability to induce learning and social change, its capacity to have immediate and direct impacts, and its impartiality in resolving conflicts. These features mean that the PAR was acceptable to the full range of groups and interests in Jepara. As the PAR made an observable difference to stakeholders' situation, they were willing to continue with the program. The lack of conflicts of interest among stakeholders is also key to successful PAR.

However, PAR is time consuming and relatively expensive because it requires a large number of participatory workshops and meetings, and the outcomes are uncontrollable (Sithole 2002). Clearly, long-lasting behavioural change cannot be achieved in a short time, as might be done with the top-down approach that is avoided in the PAR process. Likewise, activities that aim to change behaviour have high financial and personnel costs, and the ultimate outcome, namely behavioural change, may or may not match the plan. Because PAR is a dynamic process operating in a social, economic and political context, we cannot avoid local politics, as politics drive social change. Nevertheless, outcomes of PAR tend to be grounded and lasting.

The PAR method applied during the development of the roadmap resulted in clear outputs and outcomes. This participatory method offers valuable opportunities for all those involved, particularly those who are otherwise weak and marginalised, as they can participate in the process. As governments generally hire professional consultants to develop plans, regular members of the public have little opportunity to engage in the process and to be considered in plans to develop the industry. During the development of the roadmap, SMEs, as represented by APKJ, were able to actively express their initiative and ideas; indeed, they took the lead in many issues such as on the need to alter the government's budget allocations for training and trade exhibitions. Early on in the process we laid the ground work for balancing the power between APKJ and larger actors, by inviting the smaller players to submit ideas on the roadmap earlier.

The development of the roadmap was driven by industry demand. People in the furniture industry wanted clear policy guidance on the future development of the industry. At the time, the district government had no guidance apart from a furniture industry roadmap issued by the Ministry of Industry, which set out broad, national-level policies, where it was unclear what the effect in Jepara would be. Large companies wanted an indication of the future direction in tackling the shortage of raw materials, appropriate labour payments and certification. Small-scale furniture producers wanted to know how to market their products more efficiently to generate greater value-added or how to organise themselves to strengthen their bargaining power with large buyers. NGOs wanted to influence policy related to the furniture industry for the benefit of local communities. The roadmap inspired parties' enthusiasm where it touched directly on their interests.

7.2.2 Results

We approached several aspects in the project with caution, particularly the establishment of APKJ. A concern among the project team was that APKJ would engender opposition from large companies united under the existing industry association, ASMINDO. However, through an intensive communication strategy, the project team persuaded ASMINDO that APKJ could benefit its members: if small-scale furniture producers could improve the quality of their products and deliver orders more punctually, then finishing companies and exporters could receive better products for export. Efforts to show how APKJ would complement competitor institutions such as ASMINDO were successful.

The eagerness of APKJ members to take concrete action and to take advantage of the training and assistance in accessing new markets actually led to more opportunities for

them. Both small-scale and large producers asked for training on certification. APKJ members requested assistance in formalising and strengthening their organisation to give them a stronger position for negotiations with more powerful actors such as ASMINDO and KADIN. Other opportunities arose from the strong support offered by the local government and other stakeholders, including, eventually, ASMINDO. APKJ's greater presence at furniture fairs and exhibitions provided scope for members to interact directly with buyers.

The commencement of the China–ASEAN Fair Trade Agreement spurred the small-scale furniture producers to increase their efficiency. They were motivated by the belief that by using wood more efficiently and better understanding how to set furniture prices, they would be able to compete. Another motivating belief was that, given the distinctive design and history of Jepara furniture, it could not be imitated easily by Chinese manufacturers.

Also of benefit to those in the industry was the training offered by the Ministry of Trade on the chain of custody and training offered by the Ministry of Forestry on opportunities to enter niche markets through compliance with the SVLK. These examples demonstrate an awareness in the government of Indonesia of the need to support the furniture industry through concrete actions such as training and networking.

The greatest benefits of the PAR were felt by APKJ members. The positive impacts of membership included greater access to markets and loans and higher incomes; social impacts were assessed qualitatively, and environmental impacts are related to SVLK certification and tree (teak) plantation. However, most of the nearly 12,000 furniture-making businesses in Jepara are not members of the association.

An unexpected impact of the PAR was the emergence of a new elite in APKJ, who do not necessarily represent the interests of all small-scale furniture producers. Therefore, it is important that the association employ institutionalised and transparent decision-making processes to ensure that APKJ leaders follow the rules in its constitution. A regular APKJ congress in which members elect the APKJ leaders may help to avoid this phenomenon of the dominant elite. Another unexpected impact was the effect that local politics had on the PAR, particularly the change in the Jepara District Head following elections in December 2012. Support for the research from district leaders contributes to its success, and having the support of both the former and newly elected District Heads was important for the research team to continue to have access to the government.

The roadmap, another major output of the PAR, evolved from discussions at the grassroots level to become a proposal debated by political leaders. This output received clear and strong support from the main stakeholder groups, who both influenced and were influenced by the roadmap. Four steps were taken in developing the roadmap: (1) workshops at the grassroots level run by APKJ and the project team, from which the idea of the roadmap emerged; (2) multi-stakeholder processes conducted in collaboration with local government, large enterprises, industry associations, women-led enterprises, NGOs and local colleges, from which the draft roadmap emerged, reflecting the common interests and goals of all stakeholders; (3) exchanges with the Jepara District Head, which led to the production of an improved and officially endorsed roadmap; and (4) a hearing with members of the District Parliament, in which the roadmap was amended, and was proposed for conversion into a district regulation (Perda). In this way, outputs and outcomes were achieved step by step, building on each other like a “ladder”, as depicted in Figure 7.

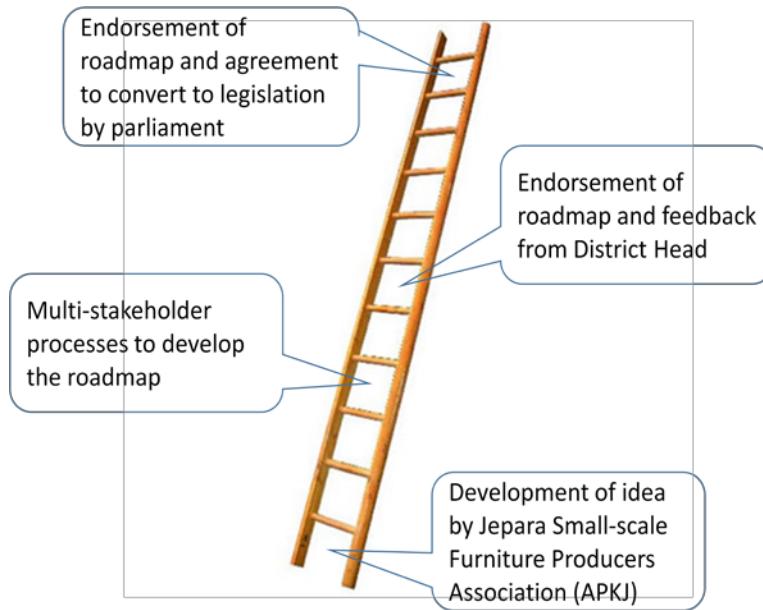


Figure 7. Ladder of outcomes

As seen from our experience, the clear mandate from all stakeholders was essential for expediting the development of the roadmap. We observed the need to clearly identify both problems and stakeholders: every problem has associated stakeholders, and stakeholders can define common problems. In this case, during the first workshop, participants from the industry expressed the need for the roadmap, which formed the basis for the work done by the project team in collaboration with all identified stakeholders. To avoid bias in the data, we took care to involve stakeholders in the data collection and analysis and we restricted our role to facilitating stakeholders in using their own selected data and analysing those data for their usefulness in developing the roadmap.

A consideration throughout the project was the critical importance of redressing power imbalances in the industry to ensure the fair representation of weak and poor stakeholders. Where stakeholders with uneven power dynamics must interact, those without power tend to be less active than those with power. Therefore, the project included capacity-building exercises to boost the power of SMEs, as represented by APKJ; as a result, members of APKJ were able to express their concerns and ideas during the development of the roadmap and indeed took the lead on many issues, such as on the need to alter the government’s budget allocations on training and trade exhibitions.

Overall, the process was time consuming, and had to function in a complex context where it could not be separated from the dynamics of local politics. Initially, the project received full support from the incumbent District Head. However, during the life of the project, the political environment in Jepara shifted, with a change in regime, a newly elected District Head, and personnel changes in some key government agencies. As a result, we had to work with new leaders and new officers.

Meeting this challenge head on proved essential to sustain the roadmap initiative and keep stakeholders informed. As a result of this strategy, the newly elected District Head became interested in interacting with the project team and with other stakeholders, such as APKJ, and in supporting the roadmap initiative, having perceived its relevance to government policy in Jepara. The newly appointed officers in government agencies were similarly responsive.

The change in political regime revealed that KADIN, many members of which had formed alliances with the new District Head, had had no involvement in the roadmap-development process, although its presence increased towards the end. Recognising the organisation’s

importance, we invited it to become involved in the process, albeit belatedly. The involvement of KADIN turned out to be a key leverage point for securing the support of the incoming District Head. Such active learning and rapid response to problems are key to successful interventions, because the aim of action research is to induce social and political transformation.

7.2.3 Theoretical insights

All ideas generated and phases of the research can be scaled up and scaled out, outside the research area and theme. This research effectively facilitated the development of new institutions to empower small-scale furniture producers. As Agrawal and Gibson (1999) suggested, a focus on institutions is fruitful and effective in advancing natural resource management. PAR is an integrated approach to researching resource management.

The use of PAR provided scope for activities that have the effect of achieving mutual understanding, increasing knowledge and skills, and changing the behaviour of small-scale furniture producers, with the ultimate effect of improving their profitability. Actions taken by the project team and APKJ, namely conducting training, participating in trade exhibitions and developing a roadmap for the furniture industry, helped small-scale furniture producers and other stakeholders to understand the importance of the fair distribution of value-added to sustain the furniture industry. These communicative actions catalysed understanding among stakeholders, as described by Habermas (1987). Action that is well communicated will orient stakeholders towards mutual agreement and collective action.

We also argue that the final result in terms of social dynamics is unpredictable, as held by complexity theory. Complexity theory engages the tempting idea that understanding the link between a transformed “whole” and its original constituent parts is difficult. The social world is a complex system characterised primarily by multiple dimensions, adaptability and non-linearity, but people often strive to change the social system by directing and engineering it. Our research yielded evidence that supports complexity theory, such as the following factors: (1) the appearance of national-level industry associations AMKRI (Association of Indonesian Furniture and Handicraft Producers) and ASEPHI (Association of Handicraft Producers and Exporters) in Jepara, which has implications for the position of APKJ because it was originally assumed to be competing with ASMINDO; (2) the internal dynamics of APKJ; (3) the dynamics among government actors, with both pros and cons; (4) the shift from a global market to a domestic one caused by the global economic crisis in 2009–10, which has positive implications for the strength of APKJ because it operates on a smaller scale; (5) the introduction of mandatory certification (SVLK), which has improved the situation of APKJ members.

Throughout the process of developing the roadmap, a range of stakeholders could communicate their legitimate interests and raise issues of concern for the future of the Jepara furniture industry. Through communication, they could not only express their own ideas but also influence and reach agreement with others.

Stakeholder participation, so essential to this type of consensus building, can take several forms, ranging from passive to self-mobilisation. In this study, it started with interactive participation, where stakeholders participate in joint analysis and agree on a common objective, which forms the foundation for action plans. In some cases, the degree of participation advanced to self-mobilisation, such as when APKJ took the initiative to challenge the banking sector’s indifference to the plight of SMEs by sending out a collective request to banks to help improve access to capital for SMEs.

8 Impacts

In accordance with a recommendation made during the final project review (recommendation no. 2), we summarised the project outcome for each project objective and linked them to the action strategies, as shown in Table 6.

Table 6. Project objectives, strategies and outcomes

Project objective	Strategy	Outcome
Objective 1: To enhance the structure and function of the furniture industry for the benefit of small-scale producers	Develop multi-stakeholder processes to support the needs of small-scale furniture producers and overcome related policy constraints	<ul style="list-style-type: none"> • Key actors in the furniture industry, including policy makers, acknowledged and participated in multi-stakeholder processes. • A comprehensive strategy for the development of the furniture industry (the “roadmap”) was developed for the period 2013–2023 and used as a draft for a Jepara District Regulation (Perda). • A draft regulation on occupational health and safety was established and is under discussion by the District Head and District Parliament in conjunction with the roadmap Perda.
Objective 2: To improve marketing by small-scale producers and their organisations	The moving-up scenario: Helping small-scale furniture producers to move up to higher stages in the value chain	<ul style="list-style-type: none"> • Jepara small-scale furniture producers now have more knowledge on market networks and behaviour. They have better knowledge about, and actively use, Internet marketing. • APKJ members have become more confident in business negotiations. • APKJ members participated in trade exhibitions in Jepara, Bogor, Jakarta, Mumbai and China. Local actors Zaenudin and Legiman participated in the International Wood Culture Society in India in November 2011, where they presented information on APKJ and promoted their products.
	The collaborating-down scenario: Urging small-scale furniture producers to collaborate with wood traders and tree growers to secure wood supplies	Small-scale furniture producers received training in tree plantations, and 1000 high-quality teak seedlings were planted on small-scale furniture producers’ private land and common land.
	The small-scale association scenario: Organising small enterprises locally and assisting them in accessing financial institutions and markets	<ul style="list-style-type: none"> • APKJ (Jepara Small-scale Furniture Producers Association) was legally established and is now fully functioning. • APKJ has gained recognition in Jepara, throughout Central Java Province, and at the national level. For instance, the Jepara government now involves APKJ in formulating government policies and regulations concerning the local furniture industry. APKJ has also been able to access training from other institutions (government, university, etc.).
	The green furniture scenario: To produce certified, eco-labelled or “green” furniture, which requires vertical and horizontal coordination between companies in the	<ul style="list-style-type: none"> • Small-scale furniture producer groups and individuals have successfully received licences under the national timber legality assurance system (SVLK), and the potential of the emerging domestic green furniture market is being explored.

	value chain	<ul style="list-style-type: none"> • DFID and the Ministry of Forestry consulted with APKJ and used it as a channel for disseminating information on the SVLK.
Objective 3: To monitor changes regarding the effects and early acceptance of innovations from objectives 1 and 2 and revise and/or enhance project strategies	Impact assessment: Monitoring throughout the project and feeding results back into activities for each objective	<ul style="list-style-type: none"> • Training for small-scale furniture producers was designed to meet their needs. The project served only as facilitator, and linked them to trainers. • Regulations on the roadmap and OH&S have been drafted and are being discussed by the District Head and District Parliament. Initially, there was no intention to initiate a draft regulation for Jepara, but it was driven by dynamics among stakeholders. • The Indonesian government's new timber legality assurance system (SVLK) came into force not long after the project started. A small group of APKJ members applied for group certification and one member applied for individual certification. Both applications were successful. • The capacity of project members (FORDA, IPB, STTDNU, STIENU) was built through the knowledge and experience the researchers acquired on value chain research. • The project generated the unintended impact of the emergence of a new elite in APKJ, who do not necessarily represent the interests of all members. Nevertheless, the uses of an institutionalised, transparent and democratic decision-making process help avoid this phenomenon. • The PAR process was affected by local politics, namely a change in the Jepara District Head following local elections in December 2012. Support by both the former and the newly elected leaders was important in having continued access to government.

8.1 Scientific impacts now and in 5 years

The project members and partners have produced scientific journal articles, books and conference papers related to VCA and Jepara furniture industry as listed in Section 10.2. These publications have been communicated and disseminated in various forms to influence policy makers, practices, researchers and public at large. Project partners and research institutions have been trained in the use of VCA. As a result, FORDA used VCA in a study on achieving fair distribution of payments from credits for reducing emissions from deforestation and forest degradation (REDD+) in case studies in Central Kalimantan and Jambi Provinces. We argued that, like furniture, REDD+ credits are a buyer-driven ecosystem service, meaning buyers are in a stronger position than REDD+ credit producers. FORDA is also considering using an action research approach in studies on REDD+ institutional arrangements in Jambi and South Sumatra Provinces.

The value chain method and findings have been used as teaching materials at IPB in forest management, forest biometrics and forestry modelling courses. The use of these methods attracted students from Indonesia, the Netherlands, New Zealand and the UK interested in doing internships with the project. In addition, many people, including some from Gadjah Mada University, visited Jepara to learn from APKJ's experiences. We have shared our findings, reports and publications with local colleges, namely STTDNU and STIENU. We uploaded the project publications for general public to the project website <http://www.cifor.org/furniture>. Table 7 shows number of downloads for them.

Table 7. Number of downloads for some project publications

Title	Publication type/Language	Total
<i>Pelangi di Tanah Kartini: kisah aktor mebel Jepara bertahan dan melangkah ke depan</i>	Book/Indonesian	1,411
<i>Menunggang badai: untaian kehidupan, tradisi dan kreasi aktor mebel Jepara</i>	Book/Indonesian	37,217
Furniture and people: a photo journey from market to forest	Book/English	6,718
Proyek Rantai Nilai Mebel: Info Mebel +	Newsletter/English	7,666
<i>Sekilas Proyek Rantai Nilai Mebel</i>	Brochure/Indonesian	2,549
Tourist map and shopping guide - High Resolution	Map/English	2,449
Tourist map and shopping guide - Low Resolution	Map/English	108
Improving capacity of small-scale furniture producers to increase profit share Institutions, certification and collective marketing	Newsletter/English	3,400
Women's empowerment and policy road map	Newsletter/English	227
<i>Pengembangan Roadmap Industri Mebel Jepara dan Pekerja Perempuan</i>	Newsletter/Indonesian	560
TOTAL		63,749

During the next 5 years, research will be conducted on the value chains of other forest products and services, such as rattan and biofuels as well as other parts on Indonesia and ASEAN countries. Understanding of the governance and distribution of value-added makes it possible to make plans and recommend actions to support the sustainability of the forest and local people's livelihoods. Value chain research is required when mainstreaming the green economy, as advocated by the Rio+20 Earth Summit, which emphasises the need to put pressure on value chains to benefit local communities and the environment.

Downstream businesses such as furniture making and upstream enterprises such as community and state-owned forest plantations can be better aligned if the division of value-added between them is understood. More researchers and students, particularly from CIFOR, FORDA, STTDNU, STIENU and IPB, will conduct VCA. At CIFOR, value chain research has been mainstreamed along with gender. CIFOR's value chain research has mainstreamed gender, and will be presenting the results of the project at the forthcoming IUFRO 2014 Conference in Salt Lake City, Utah, USA on 5th - 11th of October 2014.

8.2 Capacity impacts now and in 5 years

Numerous partners, both national and international, were involved in the project, mostly from research and development agencies. Others were from local institutions, such as the Forestry District Office, or were small-scale furniture producers at the project sites. Members of the project team shared and discussed their knowledge and experiences with people in the furniture industry, particularly their approaches for improving value-chain efficiency and enhancing livelihoods. The work involved in implementing project activities provided project members with valuable experience and helped improve their research skills.

The research also enhanced the capacity of the project's Indonesian partners in conducting action-research-based VCA. These partners include students from STTDNU, STIENU and IPB, as well as small-scale furniture producers and other individuals who were involved in the surveys on livelihoods, furniture workshops, markets, wood resources and the value chain. All were trained by project researchers before conducting the surveys. The experience they gained built their capacity in conducting surveys, dealing with people and understanding the furniture industry in Jepara.

The process of writing three books (*"Menunggang badai: untaian kehidupan, tradisi dan kreasi aktor mebel Jepara"* [Riding the storm: the life, tradition and creation of Jepara furniture actors] published in 2010, *"Pelangi di Tanah Kartini: kisah aktor mebel Jepara bertahan dan melangkah ke depan"* [Rainbow in Kartini's land: the survival and future of Jepara furniture actors] published in 2012), and *"Mengukir Fajar: pengrajin mebel berbisnis, berserikat dan meraih sertifikat legalitas kayu* [Carving dawn: small-scale furniture producers run business, organise and obtain timber legality certificate]" published in 2013 improved the capacity of local actors, both individually and in groups, in expressing themselves and writing about their experiences. All admitted that this was their first writing experience.

The project also served to improve the capacity of Bappeda in developing a strategic plan for the district's furniture industry. In collaboration with Bappeda, the project facilitated the development of a roadmap in an inclusive and participatory manner by inviting and involving all key stakeholders (KADIN, ASMINDO, FEDEP, APKJ, Forestry District Office, Cooperatives and SMEs District Office, Trade and Industry District Office, HPKJ, ASEPHI) in the development of the roadmap. Contacts at Bappeda said this approach to developing a plan was a new experience for them as they usually hire consultants to do it.

Local actors Zaenudin and Legiman travelled to India in November 2011 to attend the International Wood Culture Society, where they introduced APKJ and promoted their products. They received an order for a carved dragon valued at IDR 100 million and further orders from China. The money was used to establish CV Indonesia Furniture Center in Mulyoharjo Village, Jepara. Table 8 provides trade exhibitions that APKJ took part.

Table 8. Trade shows and exhibitions that APKJ participated in, 2009–2013

No	Activity	Venue and date
1	Trade exhibition at CIFOR annual meeting	CIFOR Bogor, October 2009
2	Indonesian Trade Expo	PRJ Arena Jakarta, 28 October – 1 November 2009
3	Small-scale Enterprise Exhibition	Botani Square Bogor, 7–8 November 2009
4	Jepara Expo by Government of Jepara	Jepara, 3–6 August 2010
5	Trade exhibition at CIFOR annual meeting	Bogor, 11–16 October 2010
6	Export Products Exhibition	Jakarta International Expo, 13–18 October 2010
7	International Furniture & Craft Fair Indonesia (IFFINA)	Jakarta, 11–14 March 2011
8	Jepara Expo	Jepara, 24–26 July 2011
9	Export Product Exhibition (Pameran Produk Ekspor or PPE)	Jakarta, 19–23 October 2011
10	Index Trade Fair & Event 2012	Mumbai, India, 18–21 October 2012
11	Trade exhibition	DP Mall, Semarang Indonesia, 10–15 October 2012
12	2012 International Live Wood Carving Show and Competition China–ASEAN	Nanning, China, 16–26 November 2012

No	Activity	Venue and date
13	Open showroom	Cibinong, Bogor, Indonesia (2013)
14	International Furniture & Craft Fair Indonesia (IFFINA)	Jakarta, 11–14 March 2013

The project is continuing to build the capacity of APKJ so that it can be self-sufficient. This has included helping develop a cooperative as the commercial arm of APKJ. The cooperative manages the daily operation of the marketing portal (www.javamebel.com). The project has also tried to improve the gender balance of APKJ members by providing training programs tailored to women in collaboration with IWAPI, a women's business organisation.

We set up an international internship and also accepted interns from local universities. The project supported three PhD and seven master's students in conducting studies on topics related to furniture value chains. Five undergraduate students at IPB are conducting research in Jepara with the support of the project. One of the project members, Melati Anggara, undertook a Master's program on natural resource management and sustainable development at Australian National University from 2010 to 2012, after which she resumed her position in the project.

Over the next 5 years, the capacity of young researchers from FORDA, IPB and CIFOR, such as Nunung Parlinah, Ramadhani Achdiawan, Melati, Rika Harini Irawati, Efi Yuliati Yovi, Sulthon and Ahmad Zaenuddin, will be improved. Students from various colleges and universities will graduate and enter the furniture world, and local colleges in Jepara will have more data on the local furniture industry.

Jepara government agencies such as Bappeda will have more data on the Jepara furniture industry and are better equipped to develop plans in more participatory manner; the Industry and Trade District Office will be allocated more funds to support small-scale furniture producers, thanks to the roadmap; the District Parliament will pay more attention to the interests of small-scale furniture producers; associations will collaborate better, particularly small and large companies; small-scale furniture producers will have more bargaining power; and the District Head, furnished with better understanding of the furniture value chain, will become more considerate of the concerns of small-scale furniture producers.

8.3 Community impacts now and in 5 years

8.3.1 Economic impacts

In a study of the project impacts, APKJ members explicitly mentioned that they had derived positive benefits from the association and agreed that the association has to continue operating. Compared with non-members of APKJ or workshops in general, members stated that, since joining APKJ, they had had more opportunities in terms of either better market access or innovations. This has had positive implications for their revenue. Half of the APKJ champions managed to access loans from BRI (Bank Rakyat Indonesia) immediately after participating in financial training. Loans granted were in range of IDR 10 million–50 million. In addition, APKJ members have better access to markets through their participation in trade shows and exhibitions. APKJ participation in several exhibitions in Bogor and Jakarta, such as the Indonesia Trade Expo and Small-scale Enterprise Exhibition, and major furniture events, such as International Furniture and Craft Fair Indonesia, demonstrated how APKJ had succeeded in accessing wider markets as well as building networks with potential buyers. Some buyers have since visited Jepara for further negotiations.

APKJ members also referred to innovations offered through the association, namely the use of an Internet portal to market their furniture. Nevertheless, they also suggested that

APKJ find better mechanisms and procedures for using the portal and enhance cohesion among members. A few APKJ members even managed to create new business groups.

The project and the formation of APKJ have produced economic impacts, particularly for the association's 126 members. A recent survey demonstrated that membership in APKJ had economic benefits, particularly through participation in trade shows and e-marketing through javamebel.com. The portal javamebel.com has been used for business transactions amounting to about IDR 100 million or about US\$ 10 thousand since it was launched.

An impact assessment comparing outcomes between APKJ members, non-members of APKJ and APKJ champions showed that all are noticing improvements in several aspects of the furniture industry. APKJ members and champions have seen improvements in total sales, profits, production quantity, number of buyers (market expansion), wood/raw material supply and number or kinds of items produced. This indicates that APKJ members and champions have experienced improvements in most aspects of furniture production (Table 9). The percentage improvements within 1 year and 5 years for APKJ and its champions are relatively high, and are in a steeply increasing phase at the moment.

Table 9. Changes in business performance in the previous 12 months and previous 5 years

Aspect		Change in previous 1 year (2011–2012)			Change in previous 5 years (2007–2012)		
		Stable	Decrease	Increase	Stable	Decrease	Increase
Sales	Non-APKJ	35%	21%	44%	26%	14%	60%
	APKJ	15%	4%	81%	7%	4%	89%
	APKJ Champion	14%	14%	71%	14%	7%	79%
Total		25%	14%	61%	18%	10%	73%
Production quantity	Non-APKJ	37%	19%	44%	23%	9%	67%
	APKJ	7%	4%	89%	4%	7%	89%
	APKJ Champion	14%	7%	79%	7%	7%	86%
Total		24%	12%	64%	14%	8%	77%
Profit	Non-APKJ	28%	12%	60%	21%	5%	74%
	APKJ	19%	4%	78%	7%	4%	89%
	APKJ Champion	7%	14%	79%	7%	7%	86%
Total		21%	10%	69%	14%	5%	81%

Overall, 81% of APKJ members experienced an increase in product sales over 2011–2012, whereas only 44% of non-members of APKJ claimed that their sales increased. In addition, 89% of APKJ members experienced an increase in total production in 2011–2012, whereas only 44% of non-members saw an increase.

In the next 5 years, APKJ members' businesses will grow and their livelihoods will improve. They will participate in more trade exhibitions and will have better market access, including through online marketing. The implementation of policies contained in the roadmap will create further opportunities for them.

8.3.2 Social impacts

The establishment of the APKJ was a major step in the small-scale association scenario. As of April 2009, 60 small-scale furniture producers had joined APKJ; membership has since increased to 126. The local Jepara government has recognised APKJ and is committed to funding its participation in future furniture fairs and exhibitions. ASMINDO has acknowledged the importance of APKJ as a forum for improving small-scale furniture producers' capacity to make better-quality furniture, to fix their internal management and cost-benefit calculations, and shorten their delivery times.

Cohesion among small-scale furniture producers has improved since the formation of APKJ, which serves as a forum where they can interact, build their influence and set targets for the future. APKJ can stand up to and negotiate with other associations in Jepara such as ASMINDO and HPKJ. The Jepara District Head has acknowledged the important role of APKJ.

The establishment of APKJ has led to greater networking among small-scale furniture producers and strengthened their voice in social and political arenas in Jepara. APKJ and its members have been invited to take part in many discussions on the Jepara furniture industry. Local college students also have done internships with APKJ. In the political arena, government has counted on APKJ to represent the voice of small-scale furniture producers in business and policy events. Local government has recognised the role of APKJ in organising its members.

For example, during the Jepara Expo, the Jepara government provided exhibition stands for ASMINDO and APKJ of the same size. This is a clear indication of the local government's recognition of APKJ. APKJ was also invited to represent small-scale furniture producers in local government decision making.

The project has also improved networking between small-scale furniture producers and the Ministry of Trade and Industry, the Ministry of Forestry and agencies under these ministries at various levels. These networks have begun to include APKJ and its members on their list of invitees for any capacity-building, policy and business events. APKJ is becoming an example of how small-scale producers can organise themselves for their own benefit. However, this does not remove the challenges for APKJ in strengthening its institutional arrangements and minimising free-riding and rent-seeking behaviour among its members.

The project also inspired students to develop a film festival aimed at sustaining Jepara's furniture industry and culture. On completing the household survey, students from local colleges STTDNU and STIENU were inspired to form a committee to organise a Jepara Documentary Film Festival, and invited junior and senior high school students in Jepara to produce short documentary films. The film titled "Survival of Javanese furniture", published by CIFOR on CD (20 minutes long) and on YouTube (<http://www.youtube.com/watch?v=Mw6TOjFzIqA>) (4 minutes) raised public awareness about the plight of small-scale furniture producers and increased understanding of the differences between the mass production of cheap furniture and high-quality, premium-priced furniture. Those involved in making films developed good understanding of the various interests at play in the furniture industry.

A furniture photo book featuring products made by APKJ champions, published in December 2009, helped to promote their products. We found evidence that people were interested in contacting buyers after reading the book.

In an exercise where people wrote about their own experiences, the story-writing process strengthened discussions between forest farmers and furniture producers. Forest farmers, for instance, had to meet to discuss writing a story about their group and forests, in a process that revitalised their group. Furthermore, interaction among writers, including women, improved their network quotient.

The project has also had the effect of increasing communication and networking among small-scale furniture producers, big businesses, NGOs and local government through the process of developing the roadmap for the furniture industry. This process amplified the voice of small-scale furniture producers in Jepara's political and social arenas. The roadmap has been discussed and reviewed by the District Head and the Jepara Parliament and will be adopted as a district regulation (Perda) in the near future. Mr Ja'far, Deputy Chairman of the Jepara District Parliament, said that members of parliament had debated the roadmap and were committed to the legislative process of converting it into a district regulation (Perda). The fifth project annual meeting recommended establishing a small task force to facilitate and assist with the academic draft and legal drafting.

From the studies on gender in the value chain, the following recommendations emerged: (1) understand the role of gender in the entire value chain; (2) support value addition by women; (3) build value-addition opportunities around understanding women's time, constraints and mobility; (4) provide training in literacy, numeracy, technical skills, business skills and adaptation to markets tailored to women; and (5) advocate for minimum wage and equity legislation that supports women. We have communicated these results to IWAPI and the Jepara government and followed them up through various training sessions and in the roadmap.

In the next 5 years, the OH&S regulation will improve the well-being of small-scale furniture producers. A tourism map, which shows the locations of furniture-making workshops, will increase information flows from Jepara, inform people about Jepara and bring in more traffic from big buyers and companies outside the district. The roadmap will improve collaboration between organisations in Jepara, and will lead to greater access to political elites and policy makers, more government assistance, and more links to central government ministries, such as those responsible for forestry and trade and industry.

8.3.3 Environmental impacts

The teak and mahogany furniture industry in Jepara has been developed over many decades, as is apparent from the huge number of furniture workshops in the district. However, with timber resources becoming increasingly scarce, those in the furniture industry should consider growing trees in collaboration with forest farmers. Some big furniture companies have begun to invest in teak plantations and the evidence suggests that it is in the interests of small-scale furniture producers to have their own plantations too. Indirectly, the sustainability of the furniture industry will boost demand for timber sources, potentially raising wood prices. This will provide greater incentives for people to grow trees and thereby improve the environment.

As part of the "collaborating-down" scenario, small-scale furniture producers were trained in plantation management, and 1000 high-quality teak seedlings (clone teak) were planted on small-scale furniture producers' private land and on common lands. Through this kind of activity, furniture producers can address the shortage of raw materials while greening the environment and enhancing carbon storage. Planting does create challenges concerning furniture producers' agreement over the use of teak planted on common land. However, planting teak is only part of the work; other tasks include maintaining the trees, benefit sharing, harvesting and reinvesting the benefits.

In an effort to implement the "green furniture" scenario, small-scale furniture producers were trained in obtaining certification and were encouraged to enter the certified-products market. Communication channels with the Center for Indonesia's Export Development (or Pusat Pengembangan Ekspor Indonesia [PPEI]) in the Ministry of Trade have been established. The PPEI has developed training on the chain of custody for small-scale furniture producers, which APKJ members attended. The Indonesian Eco-labelling Institute (Lembaga Ekolabel Indonesia [LEI]) also conducted certification training for them.

Indonesia's new timber legality assurance system (SVLK) is being promoted by the national government, and DfiD's Multistakeholder Forestry Programme (MFP) is assisting

APKJ members with attaining compliance. A small group of APKJ members participated in the group application trial and one member (Mr Latief) followed individual SVLK compliance. Mr Latief's application was successful and he was invited to London to share and present his experience with the process from the perspective of a small-scale furniture producer. The APKJ group application was approved on 30th May 2013, and it will be valid through 19th May 2019.

Wood efficiency has improved by approximately 10–15%, through training on design, sanding, finishing and marketing, among others. Better marketing has created greater value-added for the same amount of wood, thus helping to conserve trees and place more value on forests.

In the next 5 years, the fast-growing teak (*Jati Unggul Nusantara*) will be ready for harvest and the yield is likely to encourage more people to plant teak. The furniture industry in Jepara will improve its efficiency in furniture making and derive more value for each cubic metre. The practices required to attain SVLK certification will improve the sustainability of forests. More people will follow APKJ's example and seek either individual or group certification, which will lead to better forest management and a curb on illegal practices.

8.4 Communication and dissemination activities

In the course of carrying out the project, researchers have produced journal articles, books, conference papers, media articles and newsletters. The project has been sharing its activities and results through its project website since its first year (<http://www.cifor.org/furniture>). The website has been updated and actively used by stakeholders.

Members of the project team participated in a number of national and international seminars and conferences. At the international level, in October 2009, a research report titled "Value chain analysis of furniture: Action research to improve power balance and enhance livelihoods of small-scale producers" was presented at the XIII World Forestry Congress in Buenos Aires, as part of the session on Small and Medium Forest Enterprises chaired by Sophie Grouwels from the United Nations Food and Agriculture Organization. On 27 August 2010, a paper titled "Livelihood strategies of small-scale furniture producers in Jepara, Central Java, in facing tight market competition" was presented at the XXIII IUFRO World Congress, in Seoul (<http://www.iufro2010.com/>). A report on livelihoods in Jepara was presented at the 2010 China–ASEAN International Wood Culture Forum, in Guangxi, China, on 19–22 November 2010. A paper titled "Value chain governance and gender in the furniture industry" and a short documentary film titled "Survival of Javanese furniture" were presented at the 13th Biennial Conference of the International Association for the Study of the Commons in Hyderabad, India (<http://iasc2011.fes.org.in/>).

We also presented two papers at a modelling and simulation (MODSIM) conference held 12–16 December 2011 at the Perth Convention and Exhibition Centre, hosted by the Modelling and Simulation Society of Australia and New Zealand (MSSANZ). The papers were "A system dynamics approach to balancing wood supply and demand for sustaining the future industry" and "Spatial modelling approach to clustering furniture industry and regional development in Jepara, Indonesia".

We presented the project to Australian Consortium for In-Country Indonesian Studies (ACICIS) students at CIFOR headquarters on 13 January 2012. A report on how the marketing portal for Jepara was developed and how it works was presented during AFITA (Asian Federation for Information Technology in Agriculture), held by IPB on 3–7 October 2010 (<http://afita2010.ipb.ac.id/>). At the Green Business Conference, hosted by Prasetya Mulya Business School Jakarta on 30 November 2011, we presented a paper titled "Quo vadis green furniture Indonesia?"

We also made a poster presentation titled “Teak furniture value chains: An action research to facilitate furniture industry roadmap development in Jepara, Indonesia” for the World Teak Conference 2013 in Bangkok on 25–30 March 2013. Two papers, “Action research approach to strengthening institutions of small-scale furniture producers in Indonesia through policy development” and “Innovation diffusion among producer institutions to achieve better equity in the furniture industry in Indonesia” were presented at the 14th Global Conference of the International Association for the Study of the Commons in Mount Fuji, Japan, on 3–7 June 2013.

The project has released information through various communication channels, such as printed publications, audio-visual media and the Internet, with national and international reach. In December 2008, a project website (<http://www.cifor.org/furniture>) was developed to communicate the project globally. The project and its findings were presented to the Ministry of Forestry in Jakarta in April 2009. During the CIFOR Annual Meeting in 2008, the project was presented verbally and through a poster session.

The project has published a series of newsletters in English called “Furniture Value Chain (FVC) News” and in Indonesian called “INFO MEBEL Plus”. The first issue of FVC News was published by CIFOR in February 2009, and the first issue of INFO MEBEL Plus was published in March 2009.

We appeared several times on the popular local radio station Swara Jepara to talk about the project activities and products. This included the roadmap process, furniture shopping and tourism map and one of the project’s books “*Menunggang Badai*” (Riding the Storm). During the last talk show, broadcast in April 2013, we invited two members of parliament, the Assistant District Head and business associations to discuss the adoption of the Jepara furniture roadmap. The members of parliament expressed their support and commitment to converting the roadmap into a Perda. We learnt that program listeners made many comments; this feedback was then used to improve the project’s approach and processes. The followings are the dissemination products.

CD, guidelines, briefs, newsletters and proceeding

1. Purnomo H, Irawati RH. 2010. *Survival of Javanese furniture*. CD ROM. Bogor, Indonesia: CIFOR. <http://www.youtube.com/watch?v=Mw6TOjFzlqA> (Report 55)
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3. Puntodewo A, Achdiawan R, Melati, Irawati RH, Purnomo H. 2012. *Jepara furniture tourism and shopping guide*. Bogor, Indonesia: CIFOR (Report 30)
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10. Info Mebel Plus+ No. 2, October 2009 (Report 51)
11. Info Mebel Plus+ No. 3, November 2010 (Report 52)
12. Info Mebel Plus+ No. 4, January 2011 (Report 53)
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9 Conclusions and recommendations

9.1 Conclusions

There are several lessons learned by the Furniture Value Chain Project, specifically the lessons from a participatory action research project. They are explained as follows:

1. Understanding the local context is crucial. Involving local stakeholders in the process is essential because of their dual role as actors in and beneficiaries of the project.
2. It is important to have baseline data before applying the intervention. Baseline data are needed if researchers are to understand the local context and circumstances and then measure changes and project impacts after the intervention. The structure and networks of project beneficiaries have to be understood to ensure impacts are distributed efficiently among beneficiaries.
3. VCA and its dynamics provided a systemic understanding of the role of small-scale furniture producers in Jepara in the value chain. The scenarios of “moving up”, “collaborating down”, “association” and “green furniture” had different levels of success. The most successful were the moving-up and association scenarios, followed by the green furniture and collaborating-down scenarios.
4. The use of participatory action research (PAR) in the “association” scenario led to small-scale furniture producers forming an industry association called the Jepara Small-scale Furniture Producers Association (APKJ). Through this association, members were able to access new markets and bank loans.
5. Building the capacity of APKJ’s critical role, CIFOR played in accompanying APKJ over a long period, and providing multiple training opportunities.
6. PAR enabled the project to adapt, and be responsive enabling a small group of furniture producers to obtain a collective SVLK license.
7. Participatory processes were also used successfully to produce the roadmap and OH&S policies that are going to be issued as Jepara district laws. Stakeholders must feel a need for an intervention, as seen in the case of the roadmap, if the activity is to meet their expectations. In developing the roadmap, actors were required to analyse the current situation, project future scenarios, articulate a common vision, and devise ways to realise it, for which they had to communicate with each other and learn from their experiences. The roadmap-development process itself served to strengthen small-scale furniture producers’ bargaining position and build trust in government bodies.
8. When policy change is an objective, the local government, local parliament or local stakeholders that have access to policy making have to be involved from the outset.
9. To scale out the project impacts, it is necessary to help project beneficiaries to develop a network beyond the study area. Having a broader network will provide them with greater opportunities to collaborate with others and enable them to further improve their business performance.

9.2 Recommendations

1. Apply lessons learnt from the formation of the Jepara Small-scale Furniture Producers Association (APKJ) to other Indonesian centres for producing items from forest products and services. Expand the Jepara experience to work with furniture producers in other ASEAN countries, such as Vietnam, Thailand and Cambodia. If ACIAR bridging funds can be made available, undertake scoping studies in 1-2 new countries.
2. Conduct further research to understand the costs and benefits of certification and timber legality, particularly for small-scale furniture producers.
3. Conduct additional research on green buyer behaviour to better understand the opportunities to develop domestic and international “green furniture” markets
4. Stimulate policy and institutional innovations at all levels to generate opportunities for SMEs. These may include additional efforts to improve access to credit and/or subsidies to protect and support SMEs.
5. Continue research on the adoption and use of a local government instrument in Jepara with a view to applying similar mechanisms in other parts of Indonesia and/or S.E. Asia.

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10.2 Publications produced from the project

10.2.1 Journal articles

6. Purnomo H, Guizol P, Muhtaman DR. 2009. Governing the teak furniture business: A global value chain system dynamic modelling approach. *Environmental Modelling and Software* 24(12):1391–1401 (Report 68)
7. Irawati RH, Melati, Purnomo H. 2009. Analysis of value chain governance: Scenarios to develop small-scale furniture producers. *Journal of Tropical Forest Management* XV(3):96–101 (Report 34).
8. Melati, Irawati RH, Purnomo H. 2010. Upgrading wood-based industries: Harnessing the social network of small-scale furniture producers and their institutions. *Journal of Tropical Forest Management* XVI(1):10–17 (Report 35).
9. Purnomo H, Irawati RH, Fauzan AU, Melati. 2011. Scenario-based actions to upgrade small-scale furniture producers and their impacts on women in Central Java, Indonesia. *International Forestry Review* 13(2):152–162 (Report 69).
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17. Purnomo H, Achdiawan R, Anggara M, Irawati RH, Sulthon S, Shantiko B, Wardell A. *In press*. Value-chain dynamics: strengthening the institution of small-scale furniture producers to improve their value addition. *Forests, Trees and Livelihoods* (Report 58).

10.2.2 Books and book chapters

1. Purnomo H, Melati, Irawati RH. 2009. *Furniture and people: a photo journey from market to forest*. Bogor, Indonesia: CIFOR (Report 33).
2. Purnomo H, Irawati RH, Melati, eds. 2010. *Menunggang badai: untaian kehidupan, tradisi dan kreasi aktor mebel Jepara (Riding the storm: the life, tradition and creation of Jepara furniture actors)*. Bogor, Indonesia: CIFOR (Report 77).

3. Irawati RH, Purnomo H, eds. 2012. *Pelangi di Tanah Kartini: Kisah aktor mebel Jepara bertahan dan melangkah ke depan (Rainbow in Kartini's land: the survival of Jepara furniture actors and moving ahead)*. Bogor, Indonesia: CIFOR. (Report 78)
4. Fauzan AU, Purnomo H. 2012. Uncovering the complexity: an essay on the benefits of the value chain approach to global crisis studies – a case study from Jepara, Indonesia. In Suter C, Herkenrath M, eds. *World society in the global economic crisis*, 149–169. Munster, Germany: Lit Verlag. (Report 57)
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6. Irawati RH, Purnomo H, Shantiko B. (penyunting) . 2013. *Mengukir Fajar: pengrajin mebel berbisnis, berserikat dan meraih sertifikat legalitas kayu [Carving dawn: small-scale furniture producers run business, organise and obtain timber legality certificate]*. Bogor, Indonesia: CIFOR (Report 80)

10.2.3 Conference papers

1. Purnomo H, Achdiawan R, Parlinah N, Irawati RH, Melati. 2009. *Value chain analysis of furniture: Action research to improve power balance and enhance livelihoods of small-scale producers*. Presentation, XIII World Forestry Congress 2009, Buenos Aires, 22 October. (Report 5)
2. Achdiawan R, Purnomo H. 2010. *Livelihood strategies of small scale furniture producers in Jepara, Central Java, in facing tight market competition*. Presentation, XXIII IUFRO World Congress, Seoul, 27 August. (Report 81)
3. Effendi R, Parlinah N. 2010. *Kajian value chain industri furnitur jati dan mahoni: studi kasus di Kabupaten Jepara Provinsi Jawa Tengah (Teak and mahogany furniture value chains: case study at Jepara regency)*. Presentation, research study seminar held by Center for Social, Economic and Forestry Policy, IPB International Convention Centre, Bogor, Indonesia, 30 September. (Report 82)
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6. Melati, Irawati RH, Purnomo H. 2010. *Upgrading wood-based industries: harnessing the social network of small-scale furniture producers and their institutions*. Presentation, International Seminar Research on Plantation Forests: Challenges and Opportunities, Centre for Plantation Forest Research and Development, Bogor, Indonesia. (Report 85)
7. Irawati RH, Melati, Purnomo H. 2010. *Analysis of value chain governance: scenarios to develop small-scale furniture producers*. Presentation, International Seminar Research on Plantation Forests: Challenges and Opportunities, Centre for Plantation Forest Research and Development, Bogor, Indonesia. (Report 86)
8. Purnomo H, Irawati RH, Fauzan AU, Melati. 2011. *Value chain governance and gender in the furniture industry*. Presentation, 13th Biennial Conference of the International Association for the study of the Commons, Hyderabad, India, 10–14 January. <http://iasc2011.fes.org.in/> (Report 87)
9. Andriani R, Puntodewo A, Purnomo H, Achdiawan R, Irawati RH. 2011. *Spatial modeling approach to clustering furniture industry and regional development in*

- Jepara, Indonesia*. Presentation, MODSIM 2011 Conference, Perth, Australia, December. (Report 88)
10. Purnomo H, Abdullah L, Irawati RH. 2011. *A systems dynamics approach to balancing wood supply and demand for sustaining furniture industry*. Presentation, MODSIM 2011 Conference, Perth, Australia, December. (Report 89)
 11. Achdiawan R, Purnomo H, Shantiko B. 2013. *Impact assessment of action research on furniture value chain to selective micro and small scale furniture industry in Jepara*. Presentation, Symposium on “Value chains of furniture, other forest products and ecosystem services”, IPB Convention Centre, Bogor, Indonesia, February. (Report 90)
 12. Sampurna Y, Shihab R. 2013. *Meningkatkan pemasaran mebel kayu secara online melalui strategi e-business bagi Asosiasi Pengrajin Kecil Jepara (APKJ), Jawa Tengah: studi kasus di APKJ dan CIFOR (Improving furniture online marketing through e-business strategy for small scale producers association – APKJ)*. Presentation, Symposium on “Value chains of furniture, other forest products and ecosystem services”, IPB Convention Centre, Bogor, Indonesia, February. (Report 91)
 13. Yovi EY, Nurrochmat DR, Sidiq M. 2013. *Domestic market of Jepara’s small scale wooden furniture industries*. Presentation, Symposium on “Value chains of furniture, other forest products and ecosystem services”, IPB Convention Centre, Bogor, Indonesia, February. (Report 92)
 14. Nurrochmat DR, Yovi EY, Hadiyati O. 2013. *The impacts of domestic timber trading regulations to small-scale wooden furniture industries in Jepara, Indonesia*. Presentation, Symposium on “Value chains of furniture, other forest products and ecosystem services”, IPB Convention Centre, Bogor, Indonesia, February. (Report 93)
 15. Purnomo H, Irawati RH, Achdiawan R, Sulthon, Shantiko B, Melati. 2013. Action Research Approach to Strengthening Small-scale Furniture Producers in Indonesia through Roadmap Development. Paper presented orally at at the 14th Global Conference of the International Association for the Study of the Commons (IASC) in Mount Fuji, Japan, 3–7 June 2013. (Report 94)
 16. Purnomo H, Suyamto D, Achdiawan R, Irawati RH, Shantiko B, Melati. 2013. Innovation Diffusion of Producer Institution to achieve better equity in furniture industry in Indonesia. Paper presented orally at at the 14th Global Conference of the International Association for the Study of the Commons (IASC) in Mount Fuji, Japan, 3–7 June 2013. (Report 95)

10.2.4 PhD, Master’s and undergraduate dissertations

No	Name	Level	Institution	Research title
1	Anne Prestvik	PhD	Norwegian University of Life Sciences, Norway	Out of furniture business? http://www.umb.no/statisk/ncde-2009/anne_prestvik.pdf
2	Ririn Wulandari	PhD	Bogor Agricultural University, Indonesia	<i>Strategi pemasaran mebel bersertifikasi ecolabel pada stratifikasi konsumen hijau di Jakarta</i> (Marketing strategy for certified furniture products for “green” consumers in Jakarta) http://elibrary.mb.ipb.ac.id/gdl.php?mod=browse&op=read&id=mbipb-12312421421421412-ririnwulan-1169&q=Based
3	Takahiro Fujiwara	PhD	Kyushu University, Japan	Cross-scale analysis of institutional linkages between people and forests in the social transition process: a case study of teak forest management in Java, Indonesia http://mars.lib.kyushu-

				u.ac.jp/infolib/meta_pub/G0000002GAKUISYOSI_19209
4	Pipiet Larasatie	Master's	University of Canterbury, New Zealand	Furniture export and domestic marketing (in progress)
5	Yahya Sampurna	Master's	University of Indonesia, Indonesia	<i>Meningkatkan pemasaran mebel kayu secara online melalui strategi e-business, bagi Asosiasi Pengrajin Kecil Jepara (APKJ), Jawa Tengah: studi kasus di APKJ dan CIFOR</i> (Improving furniture online marketing through e-business strategy for Jepara small scale furniture association (APKJ), Central Java) http://lontar.cs.ui.ac.id/Lontar/opac/themes/ng/detail.jsp?id=39797
6	Diana Vela Almeida	Master's	Wageningen University, The Netherlands	Collective action of small-scale producers of furniture in Jepara, Indonesia (Intern report)
7	Susan C. Nansereko	Master's	University of Copenhagen, Denmark	A gender perspective to value chain analysis for wood-furniture industry upgrading: a case of Jepara, central Java, Indonesia https://diskurs.kb.dk/item/diskurs:12917:1
8	Nunung Parlinah	Master's	Bogor Agricultural University, Indonesia	<i>Rantai nilai (value chain) mebel kayu mahoni Jepara</i> (Value chain of Jepara mahogany furniture) http://repository.ipb.ac.id/handle/123456789/41184
9	Kasmalia Sari	Master's	Bogor Agricultural University, Indonesia	<i>Pemasaran mebel kayu jati Jepara</i> (Marketing of Jepara wooden teak furniture) http://repository.ipb.ac.id/handle/123456789/43569
10	Oki Hadiyati	Master's	Bogor Agricultural University, Indonesia	<i>Analisis kebijakan pemenuhan bahan baku lokal terhadap kelangsungan industri mebel jati di Kabupaten Jepara</i> (Policy analysis on fulfilling local wood demand for furniture industry in Jepara District)
11	James Erbaugh	Master's	University of Oxford, United Kingdom	Forest resource allocation and network among community forest model and the state enterprise model (in progress)
12	Khairul Umam Gunawan	Undergraduate	Bogor Agricultural University, Indonesia	<i>Potensi dan pengembangan tegakan hutan rakyat jati dan mahoni di Jepara</i> (Potency and upgrading the teak and mahogany standing in community forest in Jepara) http://katalog.perpustakaan.ipb.ac.id/senayan3-stable11/index.php?p=show_detail&id=94973
13	Anita Sopiana	Undergraduate	Bogor Agricultural University, Indonesia	<i>Studi pengaturan hasil dalam pengelolaan hutan rakyat di kabupaten Jepara</i> (Study on benefit distribution in community forestry in Jepara regency) http://repository.ipb.ac.id/handle/123456789/48109
14	Woro Sutia Lestari	Undergraduate	Bogor Agricultural University, Indonesia	<i>Model simpanan karbon pada mebel kayu jati di Jepara</i> (Carbon storage model in Jepara teak furniture) http://repository.ipb.ac.id/handle/123456789/48259
15	May Caesarry Rachmadi ni	Undergraduate	Bogor Agricultural University, Indonesia	<i>Dinamika potensi tegakan dan sistem pengelolaan hutan rakyat jati di Jepara</i> (The dynamics of potential teak standing stock and community forest management system in Jepara regency) http://repository.ipb.ac.id/handle/123456789/48228

11 Appendixes

11.1 Appendix 1: List of unpublished and published project reports referred to in final report

For copies of any of these reports please contact the ACIAR Forestry Research Program Manager or the Project Leader.

Report No	Title	Type	Written in
1	Value chains survey questionnaire	Guide	Indonesian and English
2	Report on wood sources and constraints on timber acquisition	Report	English
3	Report on the efficiency and constraints study	Report	English
4	Background paper on grouping patterns	Report	Indonesian
5	Paper on value chain governance and scenarios submitted to the 2009 World Forestry Congress in Argentina	Conference paper	English
6	Literature review on furniture value addition and distribution	Report	English
7	Report on furniture actors and value addition and distribution	Report	English
8	Report on leading firms, power relations, existing rules	Report	English
9	Life stories from key furniture actors	Manuscript	Indonesian
10	Workshop report on strengthening the structure of the Jepara furniture industry to face the ASEAN– China Free Trade Area	Minutes	English
11	Report on the structure of the furniture industry	Report	English
12	Report on value addition	Report	English
13	Workshop report on capacity improvement and policy to adapt to market demand	Minutes	English
14	Workshop report on access to capital and entrepreneurship for APKJ members	Minutes	English
15	Workshop report on access to capital and entrepreneurship for women	Minutes	English
16	Report on the establishment of APKJ cooperative	Report	Indonesian
17	Report on the furniture industry policy pathway analysis	Report	English
18	Policy brief on recommendations to balance value addition distribution among furniture actors, men and women, and overcome constraints	Policy brief	English
19	Workshop reports on a comprehensive strategy to enhance the furniture industry	Minutes	Indonesian
20	Questionnaire for international market survey	Guide	Indonesian
21	Report on Jepara furniture export and marketing	Report	English
22	Questionnaire for domestic market	Guide	Indonesian
23	Report on the domestic market for Jepara wooden furniture	Report	English
24	Research report on consumer preferences: an additional analysis of the domestic market for Jepara wooden furniture	Report	English

25	Certification training report	Minutes	Indonesian
26	Trade exhibition preparation management training	Minutes	Indonesian
27	Report on self-assessment for certification by APKJ “champions”	Brief report	English
28	Market action plan for each APKJ “champion”	Brief report	English
29	Report on gender in furniture value chains	Report	English
30	Jepara furniture industry tourism map	Guide	English
31	Method for obtaining spatial data to support the analysis of the furniture value chain	Report	English
32	Institutional survey of the furniture value chain	Report	English
33	Furniture and People: A Photo Journey	Book manuscript	English
34	Analysis of Value Chain Governance: Scenarios to Develop Small-scale Furniture Producers	Journal article	English
35	Upgrading Wood-based Industries: Harnessing Social Network of Small-scale Furniture Producers and Their Institutions	Journal article	English
36	Jepara small-scale furniture producers’ training needs assessment report	Report	English
37	APKJ champions product catalogue	Book manuscript	Indonesian
38	The political economy study report	Report	English
39	Study on stakeholders and their roles		English
40	Questionnaire for household survey	Guide	Indonesian
41	Report on furniture makers’ livelihoods	Report	English
42	Report on criteria, indicators and method for assessment	Report	English
43	Report on monitoring of project impacts	Report	English
44	Report on feedback and lessons learnt	Report	English
45	News Furniture Value Chains No. 1, February 2009	Newsletter	English
46	News Furniture Value Chains No. 2, June 2009	Newsletter	English
47	News Furniture Value Chains No. 3, April 2010	Newsletter	English
48	News Furniture Value Chains No. 4, January 2011	Newsletter	English
49	News Furniture Value Chains No. 5, May 2011 0)	Newsletter	English
50	Info Mebel Plus+ No. 1, March 2009	Newsletter	Indonesian
51	Info Mebel Plus+ No. 2, October 2009	Newsletter	Indonesian
52	Info Mebel Plus+ No. 3, November 2010	Newsletter	Indonesian
53	Info Mebel Plus+ No. 4, January 2011	Newsletter	Indonesian
54	Info Mebel Plus+ No. 5, July 2012	Newsletter	Indonesian
55	Short movie about the struggles of Jepara small-scale furniture producers	Short movie	Indonesian with English subtitle
56	Details of stakeholders study and roadmap development		English
57	Fauzan AU, Purnomo H. 2012. Uncovering the complexity: an essay on the benefits of the value chain approach to global crisis studies—a case study from Jepara, Indonesia. In Suter C, Herkenrath M, eds. World society in the global economic crisis, 149–169. Munster, Germany: Lit Verlag.	Book chapter	English

58	Value-chain dynamics: strengthening the institution of small-scale furniture producers to improve their value addition - a special issue of the journal <i>Forests, Trees and Livelihoods</i>	Journal article	English
59	Academic draft for occupational health and safety (OH&S) in the furniture industry	Report	English
60	The project review report	Report	English
61	APKJ business plan	Manuscript	English
62	Training manual for furniture producers	Guide	Indonesian
63	Shackleton S, Paumgarten F, Kassa H, Husselman M, Zida M, Purnomo H, Irawati RH, Fauzan AU, Melati. 2012. Gender and value chains. CIFOR Info brief No 49. Bogor, Indonesia: CIFOR	Info brief	English
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87	Purnomo H, Irawati RH, Fauzan AU, Melati. 2011. Value chain governance and gender in the furniture industry. Presentation, 13th Biennial Conference of the International Association for the study of the Commons, Hyderabad, India	Conference paper	English
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