

Public Evaluation Report
FSC – Forest Management
Group Certificate: IMO-FM/COC-027510

Certification

Report No.: 07 2416 02

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Date of control:	Aug. 30, 31, Sept.1, 2007
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Date of report:	28. Dec. 2007
Date of certification	29. Dec. 2007
Validity of certificate	31. Dec. 2008

Client

This report was generated for Jiangsu Mingji Wood Development Co., Ltd (hereinafter called MWD) for the estate managed by them. It may not be used for advertising purposes without the expressed written permission of the contractual partners. All following information was checked and authorised by the client.

Purpose of Audit

The task was to carry out the evaluation of the forest management in accordance with the IMO standard control program accredited by FSC.

This report is the public part of two reports concerning forest management which are the basis of the decision on the certification by the Institute for Marketecology.

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ACRONYMS

AAC	Annual Allowable Cut
AI	Annual Increment
MWD	Jiangsu Mingji Wood Development Co., Ltd.
FMU	Forest Management Unit
FSC	Forest Stewardship Council
NTFP	No Timber Forest Product
P&C	Principles and Criteria of the FSC
PSP	Permanent Sample Plot
GM	Group Management
PFEB	Protected Forest for Ecological Benefit

A: PUBLIC PART

1 Information about the company

1.1 Forest owner / group organisation

Jiangsu Mingji Wood Development Co., Ltd (MWD) is a plywood manufacturer registered and situated in Xuyi County of Jiangsu Province of China, about 80 km from Nanjing. MWD is a newly registered, privately owned company, with its own factory still undergoing construction in Xuyi county. MWD is not certified by any certification scheme before applying for FSC certification from IMO.

In order to procure its FSC certified raw material, MWD organized for group certification the five forest management stations with a total of 7,140 ha of Poplar plantations and secondary natural forests. The properties of poplar and protected natural forests primarily belong to 24 villages and forest farms, and now are consigned to the forest management stations to manage under MWD umbrella for the group certification.

In China, all of the lands are owned by the state. The ownerships of forests and plantations growing on the land vary depending on different situations. Here under the MWD certification pool 19 villages have the ownership of 19 poplar plantations and 5 forest farms have the ownership and law enforcement function of the 5 protected forests. However, the forest farms belong to the local communities too, but are exclusively assigned to the protected forests.

Individual farmers do currently not belong to the group. Here in MWD group, all the forests owned by farms and poplar plantations owned by villages are community forests, which are not belonging to any individual farmers. The 5 forest farms and 19 villages committee have the use right license of the lands where the forests and poplar plantation property are growing on. In MWD project, forest or poplar plantations owned by individual farmers are not included because of the small size and wide locations.

Forest stations, as a forestry management consulting agency, with one or several professional foresters, play an important role in providing services to local communities, i.e. help the forest owners develop a management plan, prescribe silviculture treatments, supervise harvesting and road building, market logs, pay taxes, etc. Each forest station has its own office and at least a full time professional forester and perhaps several part time staffs depending on the workload at each seasons, i.e. in harvesting and planting.

In order to make the group structure not too complex and have each forest managed in conformity with FSC requirement more easily, the 24 forest owners consigned their forest and agriculture management right to the forest management stations. In the certified period,

all management activities, no matter if forest or agriculture, are under control of the forest stations since all the 5 forest farms and 19 villages have contracted their management right to the forest stations.

Table 1-A: Forest Ownership of Members

Members	Guiwu Forest Station	Wangdian Forest Station	Huihe Forest Station	Heqiao Forest Station	Qiuji Forest Station
Poplar plantation and Protected forest ownerships consigned to members	Linshan V	Fangang V	Yangzui V	Dalianhu V	XiangshanV
	Gaomiao V	Dushan V	Dazhou V	Sanyuan V	MingshanV
	Shanhong V	Hualong V	Huayuan V	Huanglong V	Zhuliu V
	Xingxing V	Beishan V	Chenggen V	Longquan V	Longshan F
	Shuichonggang F	Gucheng F	Linchai F	Huihe F	

(The village refers to V, forest farm refers to F)

MWD developed a contract for the forest stations, as members of the group, signing up for the certified pool, a management plan that provides a framework of forest management planning for the members of the certified pool, certified pool monitoring policy and a forest management team to work with the certified pool and IMO. As member of the group, each forest station of the total five has signed the contract with MWD to enroll in the certification group.

In the group, MWD developed the certification policy, the group management system and management plan template, monitors members' activities, and keeps records and documents. While the forest station, as the resource manager of the forests is responsible to develop the management plan and operation guidance to direct day to day operations.

MWD is currently managed by General Manager Mr. Ying Zhiliang. To prepare the FSC application in the past and manage the group complying with the FSC requirements later on, MWD hired three foresters from the Forestry Administration Bureau for supervising the group members. These three foresters are working at the group level to supervise and monitor the operations of each member.

1.2 Motivation for Certification

The main objective of MWD is to produce timber from poplar plantations by an ecologically friendly use of the land and a socially responsible management of all resources sustainable forest management. There is increasing demand from exporting markets, particularly from Europe and the US in using FSC certified wood to manufacture different products and this has motivated MWD to become FSC certified

1.3 Forest and management system

Natural forests in the area were converted for other uses or degraded over the past thousand years, and there are more or less degraded natural forests remaining. The forest cover in Xuyi now is about 25.2%. Total forest lands in Xuyi are 34'205 hectares, among which 25'420 ha are 'Protected Forest for Public and Ecological Benefit (PFEB)', and 8'785 ha classified as "commercial production forest". The PFEP are off limits to timber harvesting and provide public services such as soil erosion control, water resources conservation etc.

based on the National Forest Zoning Policy. The auditors visited several of these forests and confirmed that there was neither harvesting nor any forest management activity taking place. Several of these forests were used before they had been protected, e.g. by grazing or timber harvesting. Those traces can still be seen.

Natural or planted forest cover in this area are Arborvitae, Slash Pine, Masson Pine, Loblolly Pine, Fir, Cedar, Acacia, Metasequoia, Sawtooth Oak etc.. Main species planted in the commercial forest in recent years has been poplar since the late 1970s. Conifers were planted by aero-planting in the past in Xuyi, as an activity from the government to cover the bared mountain quickly with greenery. But the poplar, as the commercial species was planted manually. Slash pine plantations were also established in the late 1980s and 1990s in the region. In this region and within the group, natural regeneration is not used in poplar plantations.

Local Poplar species grown in this region have a long history which can be traced back even to 1000 years ago. The widely planted poplar species (American Black poplar -*Populus deltoides*) and its hybrids were introduced to the area in the early 1970s. Most of the current existing poplar plantations were established on the farmlands situated on the bottomland and plain in Xuyi during 1990-2006. In recent years, the poplar has been mixed with several species such as ginkgo, date and locust (*Robinia sp.*) in order to collect valuable fruits and to enrich diversity. However, neither the fruits nor the timber of those species will be sold as FSC-certified.

There are 6,000 ha poplar plantations and the 1,100 ha protected forests (PFEB) are part of the certificate as well. Majority of these PFEB forests are mixture of broadleaf and conifers and bushes. Survey records showed that more 20 tree species and 50 woody vegetations and grasses growing in the protected forests, and maintained very good ecological functions in reservation of biodiversity, protection of water resource and natural landscape for recreation etc. The PFEP are not harvested but fully protected.

Poplar growing in the bottomland can absorb more water and rainfall that make it possible to grow inter-crops with wheat or soy bean which require dry soil. This type of agro-forestry has increased not only the forest coverage but also the crops yield, and is now widely practiced in the temperate zone of China.

Typical Poplar Management

The general rotation period is mostly 12 years. Locally contracted crews fell the trees manually by using chainsaws. Two workers are handling a rope in order to exactly control the direction of felling. One worker is felling the poplars with a chain saw, afterwards trimming and cutting into 3m pieces. The workers are taking turns by doing these work steps.

Forest tractors pick up the timber sections right at the point where the tree is cut into pieces and transport them on the numerous public roads to the client. There are neither skidding lines nor specific forest roads in the area which was formerly used as field. The roots are also dug out and sold for MDF boards; Afterwards, they till/plough the entire area.

In the next spring they plant 330 trees per hectare in the plantation spacing of 5 x 6 m by using machines. There will not be any thinning until the end of the rotation period, i.e. the space for each individual will not change from planting to harvest. The young trees were mostly grown for one year in own nurseries before moving to the final location. They do not use genetically modified material but clones. Since the loss rate in the next year will not exceed 5% by experience, they will not fill any blanks.

In the years 1 to 3, farmers grow wheat, soy bean, sweet potato or sesame as intercrops. They use chemical fertilizer, mostly nitrogen and seldom “green” fertilizer, i.e. they mix weeded grass with the soil in the planting rows. From the years 4-12 it would be too dark for any crops so that farming is not possible any longer. This also applies for fertilizing.

In the year 3 when the DBH is about 8cm, they prune the poplar up to 2,6m using handsaws. In order to obtain the best quality for peeling into fancy veneers without any branched knot, which can be used as the surface layer of plywood, they regularly continue with this in the years 4, 5 and 6 to the maximum height of 5m using the saw on a stake. From the years 7 to 11 there is no regular management; the poplars just grow. The upper section of the tree with branches will be used to peel veneers for the middle layer on the plywood.

Management Plans

All five forest stations have written management plans with standardized management plan format developed by MWD that meets FSC requirements. There are written sections covering: geology and soils, land use history, management goals, forest resource information, deed and tax information, road and access system, landowner compliance procedures, wildlife habitat; and silviculture. The current format also includes maps of property’s topography, soils and forest stands, as well as inventory/survey data, stand map with species, age distribution, structure, groundwater bodies, recreational and tourist areas, forest areas with protective function (PFEB), other areas with special functions or services.

The management plan will be updated as needed or every five years; there is a regular schedule set up for reviewing the planning strategies and incorporating into revision of the annual work planning as well. The management plan has also followed legal requirements and permitted effective management.

All of the member managed properties have an annual allowable cut (AAC) calculation as part of their management plan, and have a work schedule detailing when certain areas are recommended for harvest or thinning. The AAC is calculated based on both the annual increment and the quota approved by the governmental forestry authority.

Table 1-B: Cover Type by Age Class (in hectares)

Member	seedling	mid	near-full	Full	given Totals
Guiwu Forest Station	267	667	380	20	1334
Wangdian Forest Station	400	533	387	12	1332
Huihe Forest Station	100	320	213	33	667
Heqiao Forest Station	533	933	520	13	2000
Qiuji Forest Station	133	267	240	27	667

Table 2: Harvest Plan, 2006-2010 (Projected), in m³

	Guiwu Forest Station	Wangdian Forest Station	Huihe Forest Station	Heqiao Forest Station	Qiuji Forest Station	Total	AAC
2006	7000	7400	3700	10000	3900	32000	38000
2007	7000	7400	3700	10000	3900	32000	38000
2008	7000	7400	3700	10000	3900	32000	38000
2009	7000	7400	3700	10000	3900	32000	38000
2010	7000	7400	3700	10000	3900	32000	38000

Table 3: Inventory and Growth of Poplar Plantation (AI is Annual Increment)

Member (Forest station)	Stock (m ³)	Total Annual Increment (m ³)	Annual Increment (AI), Seedlings (m ³)	AI, mid-age (m ³)	AI, Near-full-gr own (m ³)	AI, Full-gro wn (m ³)
Guiwu	91600	19460	2400	10000	6960	100
Wangdian	85200	18660	3600	8000	6960	100
Huihe	50400	10000	900	4800	4200	100
Heqiao	126800	28260	4800	14000	9360	100
Qiuji	50400	9720	1200	4000	4320	200
Total	404400	86100	12900	40800	31800	600

Table 4: Poplar Reforestation Plan (Hectares)

<i>Member (Forest station)</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Guiwu	90	90	90	90	90
Wangdian	70	70	70	70	70
Huihe	50	50	50	50	50
Heqiao	120	120	120	120	120
Qiuji	100	100	100	100	100
<i>Total</i>	<i>430</i>	<i>430</i>	<i>430</i>	<i>430</i>	<i>430</i>

1.4 Connection to the environment and to the socio-economics

1.4.1 Environmental aspects

Xuyi County where MWD is located is in the transition area of subtropical and temperate zones, in middle from Northern China to Southern China. One specialty of the region is the richness of water. There are hundreds of lakes, rivers, and small reservoirs located within Xuyi. As the third longest river, the Huihe river goes across Xuyi, and was famous of flooding frequently in the past before 1970s. There is also the third largest lake in Southern China, the Hongze Lake, connecting to Northern Xuyi. Topographically, the area is divided

to two zones: 1) highland parts in the South and West; 2) flat plain and bottomland in the North and East. Here in Xuyi, the lands area are classified based on usage as 40% farmland, 20% highland, 20% bottomland, and 20% water bodies.

The annual average temperature is around 13.4°C. Quarterly winds are strong, and climate is gentle and wet. The four seasons of the climate are clearly distinguished. Over the past ten year period annual precipitation averaged 2,116mm with annual snowfall of 45cm.

Soil types of the forested and planted area are yellow earth, yellow brown earth, and meadow black earth. The land territory is low mountains and hills in the south and west of Xuyi, and plains in the north and east.

There is a large amount of information on poplar plantings worldwide. Poplar is a common plantation species in temperate countries used primarily for paper pulp, plywood, particleboard and medium density fiberboard. For poplar plantations in middle and south China, a number of scientific publications that refer to a long-term history of successful introduction and cultivation of poplar species have been cited. Poplar and its hybrid species found and established in the MWD plantations have been growing in the area over the last three decades. According to research cited by MWD, poplar and its controlled hybrids have the best potential for short-rotation plantation development in this areas. It is fast growing, disease and pest resistant, well adaptive to historically deforested and degraded lands, and has low nutrient demand. Poplar is among the only few species that can survive after the standing land flooding.

As the introduced species, it is not invasive, has not crossed to any native species, has no naturally regeneration ability (natural generating by seed or outside of coppicing), and has some positive effects on the environment by increasing forest cover. In order to prevent the genetically modified organism in the poplar plantations, MWD has consulted Nanjing Forestry University and Jiangsu Academy of Forestry Science and obtained an official proof that the species included in MWD management is not genetically modified.

Except the poplar plantation, some areas of protected forest with native species are included in the scope as well, which cover at least 15% of the total managed area. The group's management ensures the protection of these PEFBs.

Forest specialists surveyed the area in 2005. Four Rare Threatened and Endangered (RTE) species might appear in the protected forests. Nevertheless, the MWD staff, the stakeholders and the auditors could not see that any of the forests would fit into one of the categories for High Conservation Values Forests.

In the future, the plantations should be dispersed in the landscape in order to contribute to multi-use and user right patterns.

1.4.2 Socioeconomic aspects

Although 25% percent of the land area of Xuyi is covered by forest, community agroforestry is one of the leading industries in this region. After many years in practice, poplar plantation now plays a major role in the economic and social status of forest owners and farmers in the area. 75% of the villages' area is covered by the certificate; the rest belong to small private farmers who are not members of the group. Since all the forest management jobs will be offered to local inhabitants, including reforestation, thinning, pruning, harvesting, infrastructure improvement and equipment and facilities acquisitions, except workers directly employed in milling, sales and administration, great economic benefit is expected to the local society and residents.

In addition, the group has included some PFEB forest in the certification scope, they will receive considerable amount of subsidies from the government agencies for fire prevention, wild animal protection, water body conservation, forest survey etc.

The American Black Poplar replaced the local Chinese White Poplar (*Populus tomentosa* Carr.) by taking the advantages of faster growing, easy processing, more economic value, and less investment than local species.

1.5 Products and wood use

1.5.1 Products of the forest

The main products are poplar logs and its branches and roots as the by-product.

Pine and broadleaf logs in small quantities are other products which come from the PFEB. MWD will follow the National Forestry Code (DB33/T379.4 - 2002, Management of PFEB). The PFEBs are classified into three types. The 1st class on deep slopes with high risk of soil erosions is totally banned for any cutting. The 2nd class could be managed with low intensity thinning and weeding in order to improve the forest health. The 3rd class allows selective cuts in order to convert the PFEP to uneven aged, multi-level, biodiversity forests e.g. on glaxis with deep soils and low risk of erosion. However, the classification is not yet done in the certified area.

1.5.2 The basis for Harvesting of timber

According to the Harvesting and Regeneration Administration Protocol of China, MWD has to get approved for five years by the local Forestry Authority for timber harvesting (Table 2), where detailed AAC that MWD must not exceed each year except situations when unregulated felling occasionally occurred. The AAC is designed based on monitoring the increment of PSP set up by MWD and the principle of Chinese Forest Law regarding that the cutting volume must be less than the increment in the same forest management unit.

In MWD's management plan, the area of clear cut is not specified since there is no slope limitation in the poplar plantations. However large clear cutting, i.e. more than 5 hectare blocks, has to be approved by the higher level of forestry administration in addition to the regular procedure, and the specific reason must be justified.

1.5.3 Final point of certificate

The logs will be marked with a red tag on the front side. The final point of the certificate are the wood logs and branches that leave MWD on the cutting site if the woods are scaled there by weight and transported by the purchaser, or that arrive in the log yard of the buyer if the logs were transported by MWD or its contractor, mostly a farmer. The logs will be stored in a separate area.

Other logs of lower dimensions or qualities, fuel wood and part of the bamboo are directly sold from the forest and removed by the villagers for personal use. They are not sold with any FSC declaration.

2 Certification process

2.1 Standards

The "Principles and Criteria of the FSC International" are the basic standards and minimum requirements which are valid for the FSC certification world-wide. This standard is supposed to be adapted to the regional situation by regional FSC working groups. It also needs to be adapted if non timber forest products are managed. If no regional working group exists the adaptation to a local standard has to be done by IMO.

For China the regional FSC working group has just been established in April 2007 and no adapted standard was available at the time of the audit, therefore the generic standard of IMO which is accredited by FSC was used as basis. By sending this standard to the stakeholders, comments were sought about the standard and the need for regional adaptation.

In order to harmonise with neighbouring countries and standards for similar situations, the generic standard for China of SmartWood, was taken into consideration for the adaptation process. The co-auditor (also being the local expert) evaluated the legal situation in China and included a list of applicable laws. Based on all information available, a local standard for China was adapted, which is available on the webpage of IMO.

During the certification by IMO it is checked whether all parts of the guidelines are fulfilled in a satisfactory way. No special parts of the guidelines are weighted more or less than others. Any non-compliance with the standard results in a condition or precondition.

2.2 Contractual basis

Certification according to the FSC requirements is only possible based on a clear contractual basis. The audit contract defines the duties of both parties and gives the right to use the logo for the company after the certificate was issued.

With the application to IMO in October 2006 and the signature of the contract MWD confirms its will to get certified for the forest in its management scope and the timber sales according to FSC.

2.3 Stakeholder process

FSC certification controls whether forest management will meet all needs concerning ecological, economic and social aspects. Therefore the demands of any group who is dependent on forests or engaged in forest protection must be considered. To include these needs into the certification process, representative stakeholders are informed and asked for comments about the standard and the audited company.

Stakeholder consultation is obligatory for any FSC certification. The comments of stakeholders are incorporated in the evaluation questionnaire and checked during the audit of the company by public meeting and interviews.

The stakeholder process is important to identify any conflicts between forest management and regional stakeholders with ecological, social or economical interests in the forests. Local people have also been invited for participation.

2.4 Audit

The aim of the audit is fact finding. The management system was evaluated by field visits and detailed document control in the office. A pre-assessment took place in December 2006.

The majority of forests sampled were poplar plantations. However, some protected forests were visited, too. There are five members in the group. The four members visited in 2007 exceed the minimum sample requirements for groups. Since the management is exactly the same in the entire plantation area and group members respectively and since there are no specialties in any of the forests, the four forests located next to the Mingji office were selected for the main audit.

Within the visited sites, some of the features and different seasonal activities were included in the pre-audit in winter, some in the main audit in summer:

- Recent completed commercial thinning/pruning;
- Recent completed final harvests;
- Final harvests;
- Nursery;
- Riparian areas, wildlife habitat and natural features;
- Conservation areas / bush land;
- Reservoir surrounding;
- Young plantations.

Table 5: Audit Schedule

Date	Topic	Participants
Pre-evaluation Dec. 23, 2006	Initial discussions, Field visit to Poplar plantations in the farmland and on river bank, new plantation, reserved forest region, forest part,	Mr. Xie Li, Group manager Assistant Mr. Zhu Yuzhang, administration manager of group. Mr. Peng Gan, Resource Manager of the group. Mr. Qin Xiaochun, Protection Manager of the group. Mr. Ying Gang, Assistant manager (field) IMO staff: Mr. Wang Dong (WaC), Mr. Papp-Váry Thomas (TP), Mr Ding Wei (DW), Mrs. LiXiang Catherine (Lix)
Dec. 24, 2006	Visit to poplar nursery garden, active harvesting site , final discussions, signing of the Control Report Inspection.	ditto
Main audit Morning August. 30, 2007	Opening meeting, document review	Rm. MWD Head Office in Xuyi Town. Mr. Ying Zhiliang, Group manager. Mr. Xie Li, Group manager Assistant Mr. Zhu Yuzhang, administration manager of group. Mr. Peng Gan, Resource Manager of the group. Mr. Qin Xiaochun, Protection Manager of the group. Complete IMO staff
Afternoon of August. 30, 2007	Public Stakeholder Meeting. Document review.	Mr. Zhang Jianlin, Head of Xuyi Forestry Administration. Mr. Hong Xiancai-Senior Engineer of Water Resource Administration. Mr. Cui Huayong-deputy director of

		Environment Protection Administration. Ms. Cai Jing, Forest Science Association. Mr. Dai Hang, Nanjing Forestry University. Wang Pinggui, Forest Fire Prevention Office Complete IMO staff
August. 31, 2007	<p>In the morning, field visit to Guiwu forest station including Guiwu office, overview of the management plan, a nursery with 2 year old seedling, a 6 years old poplar plantation, a second natural forest surrounding reservoir. (Complete IMO staff)</p> <p>In afternoon, visit to Huihe forest station, spot check to office and document, a 7 years old poplar plantation, a protected forest and Wangdian forest station</p> <p>Wang Diang Forest Station At Wang Diang and Gu Cheng forest farm: Protected forest with sample plots. Interview with patroller. Gu Cheng forest farm: Other species besides poplar and fruits, fertilizer At Hua hong road: Poplar nursery, fertilizer At Liangyin: 5 year old plantation: General management, "green" fertilizer after weeding.</p> <p>Late afternoon, document review against the Check list for FSC – group management.</p>	<p>Mr. Xie Li, Group manager Assistant Mr. Zhu Yuzhang, administration manager of group. Mr. Peng Gan, Resource Manager of the group. Mr. Qin Xiaochun, Protection Manager of the group. Mr. Dai Hang, Assistant manager (field) WaC, DW</p> <p>TP, LiX</p> <p>WaC</p>
Morning Of September. 1, 2007	Field visit to Heqiao forest station, spot check to poplar stands of Dalanhu 2000, and Dalanhu 3000, a stand of new poplar plantation.	ditto
Afternoon of September 1, 2007	Document review, closing pre-conditions from the pre-evaluation, identify findings, closing meeting.	All staff and managers

The IMO team consisted of one international IMO forestry expert and one Chinese co-auditor. The international expert is qualified by a forestry education in Germany and Switzerland (university degree and Staatsexamen) and seven years of audit work for IMO in forestry management and chain of custody and certifications. He is a member of the German national FSC working group and participates actively in the development of national standards and other work.

The Chinese expert has a Bachelor of Science degree in forestry from 1982. He has over 20 years of practical experience in forest conservation and management. He received additional training from the World Bank, Canada International Development Agency and Canada Forest Agency in forest project management. He also participated in FSC

certification auditor training provided by other certification bodies and has participated in a number of FSC certification conferences and workshops. He has participated in 7 different types of FM certification assessment, and been lead auditor for more than 12 COC audits in the past years.

The team were accompanied by Mr Ding Wei, MSc forestry, director of the office of IMO China, located in Nanjing, and his assistant, Mrs Catherine Li as the observers to the audit.

The forest management was audited for all aspects in the field, wherever the activities were taking place. The concepts of biodiversity, worker welfare and safety and long term planning of the forest areas were important subjects of the audit. The results were documented and the detected non conformities were discussed on site. The results are summarised in the internal report.

In the office, the operation structure and the business policy were analysed by discussions with the management and other employees. Documentation was checked through a comprehensive file control.

2.5 Certification decision

The certification decision will be taken by an independent council of IMO, the IMO certification committee. This decision is based on all available information from the report, checklist, company data, stakeholder comments and peer reviewer's assessment. A formal complaint procedure is open for anybody who is not satisfied with the decision.

3 FSC stakeholder process

In order to identify stakeholders, different sources were used. The first proposal of stakeholders was made by MWD. This list was checked by the Chinese expert who added a few more addresses.

Stakeholders were informed prior to the audit in writing and many of them were also personally contacted by interviews and public meeting during the audit.

3.1 Reaction of the Stakeholders

The list of all contacted persons and institutions can be found in the annex. Since a personal meeting was planned in Xuyi from the very beginning; no written comments were submitted by local stakeholders. The meeting took place with 12 people (including interviews) for 6.5 hrs in total. The comments were positive.

Those stakeholders who are working on the national level were not present and were contacted by phone, too. They gave neutral comments lack of local knowledge of the specific forest.

Before the audit, the FSC contact person for China provided IMO with the list of the members of FSC national working group China so that these stakeholders who are working on the national or regional level could be contacted by e-mail end of July 2007. They were not present at the stakeholder meeting. They gave no or neutral comments due to the lack of local knowledge of the specific forest.

3.2 Comments on the guidelines

No comments were made on the principles and criteria of FSC or on the IMO Generic standard for China.

3.3 Comments on the forest enterprise

a) WWF China	No direct knowledge of FSC requirements and the Company
b) Xuyi Environment Protection Bureau	With the great contributions from the protected forests and poplar plantations, Xuyi county now has a very good environment with high quality of air, drinkable water in the river. The forest protected and poplar trees widely planted have provided more habitats to wild animals.
c) Xuyi Water Resource Administration	Xuyi county was recognised as ‘National Ecological Development Model’ in 2003, to which poplar plantations contributed a lot by afforesting the plain and decreasing soil erosions.
d) Nanjing Forestry University	Poplar plantation beside road can prevent local residents from traffic noisy pollution. Poplar plantation surrounding water bodies can protect soil from erosions. The poplar species has advantages in disease resistance.
e) Forest Science Association	Because large area of poplar plantation has been established, and hunting has been totally banned in this region, now the wild animals appear much more in numbers and times.

3.4 Results of the stakeholder process

The comments were positive and confirmed the information given by MWD concerning the activities and the good relationship between the MWD and the workers and other people living nearby. Several times it was stated that MWD would make great progress in terms of social and ecological management if MWD can become certified. Some stakeholders also hope that the certified timber will be sold for a higher price than before which could increase the workers’ income.

4 Required actions and improvements

The determination of the conditions is the essential result of the audit. The situation in the company is compared with the FSC Principles & Criteria and any deviation from the standard is described in the internal report. Any identified weak points will result in a ”corrective action request (CAR)”, i.e. condition (c).

In case of major violations from the guidelines this CAR will be a pre-condition (PC) which must be fulfilled before the certificate can be issued.

In case of minor deviations, conditions are issued which are to be fulfilled in a specific period of time.

In the case of insignificant possibilities for improvement which are not directly connected to the guideline, recommendations are expressed which are not binding.

Legend of the tables:	No./Year	current number and date
	Deadline	Deadline to which the condition must be fulfilled, otherwise it will be intensified (for example to a pre-condition from this moment on).
	Status	Field for internal control

4.1 Pre-Conditions

No./Year Indicator	Conditions 2007 for MWD	Dead-line	Status
24/07 PC (6.2.4)	Before cutting any timber in the PFEBs, classification of the three management types including yield estimation must be done and presented to IMO.	before any activity in PFEBs	

4.2 Conditions regarding FSC – group management (GM).

No./Year Indicator	Conditions 2007 for MWD	Dead-line	Status
1/07 c (3.5.2)	MWD must define the term in the group management system that ‘Documentation about the actual use of these forests, which are owned by the leaving members, will be kept for five years from the time that the forest owners left the group’.	04/2008	
2/07 c (4.1.4 & 4.3.3)	MWD must specify in the group management system that the corrective measures are clearly formulated, implemented and documented if members deviate from the goals of the group’s policy or the certification requirements.	04/2008	

4.3 Conditions regarding Principle 10 (Plantation)

No./Year Indicator	Conditions 2007 for MWD	Dead-line	Status
3/07 c (10.2.8)	The 5% of poplar plantation defined as restoration areas towards natural forest shall be designed in order to interconnect existing natural forests. The size, locations, and type of the restored forests should be defined accordingly.	08/2008	
4/07 c (10.3.2)	In the management of poplar plantation, MWD shall address: <ul style="list-style-type: none"> - Definition of maximum size of management units; - age classes and structures, - define a max. clear cut size. - spatial distribution of clear cuts. 	08/2008	

5/07 c (10.4.2)	MWD shall have knowledge about the performance and potential of local species in plantations and of their products on the market.	12/2008	
6/07 c (10.4.7 + 10.3.3)	A concept how to increase the genetic diversity of the poplar shall be developed	08/2008	
7/07 c (10.7.2)	A concept for improved pest-management and reduction of pesticides and fertilizer must be developed. The necessity/demand for any chemicals must be analysed prior to the use.	08/2008	

4.4 Conditions regarding Principle 4

No./Year Indicator	Conditions 2007 for MWD	Dead-line	Status
8/07 c (4.4)	Before starting any plantation or before further extensions of the area and every 5 years thereafter MWD must conduct periodical surveys about socio-economic effects of its members and neighbours.	08/2008	
23/07 c	MWD shall inform IMO when the next timber harvesting will take place in order to organise the next audit whilst this work is ongoing.	04/2008	
25/07 c (4.2.8)	Protection trousers for chain saw operators must be organised and introduced.	04/2008	

4.5 Conditions regarding Principle 5

No./Year Indicator	Conditions 2007 for MWD	Dead-line	Status
9/07 c (5.1.3)	MWD shall install a bookkeeping system which allows to define different types of costs and to analyse the costs.	04/2008	
10/07 c (5.2.2+5.4.1)	Efforts must be made in order to open new markets for wood and other forest products besides poplar.	08/2008	

4.6 Conditions regarding Principle 6

No./Year Indicator	Conditions 2007 for MWD	Dead-line	Status
12/07 c (6.3.5)	MWD must develop a plan how to integrate natural regeneration in the plantation area. Evaluation of natural dynamics of native species must be done.	08/2008	

13/07 c (6.3.6)	MWD must include knowledge about species composition and vertical structure of natural forest types for the restoration areas in order to offer a habitat for the native fauna and flora in between the plantations.	08/2008	
14/07 c (6.3.6)	Biodiversity of plantation area must be increased by including some trees of native species in between. A concept with minimum number per ha, distribution and the way of introducing these trees must be developed.	08/2008	
15/07 c (6.6.2)	A list of applied chemicals (including those for intercrops) must be documented and monitored (product name, active ingredient, reason for application, date/time, concentration, etc.).	02/2008	
15a/07 c (6.6.2)	A cost/benefit analysis must document the effectiveness of the chemicals used.	08/2008	

4.7 Conditions regarding Principle 7

No./Year Indicator	Conditions 2007 for MWD	Dead-line	Status
16/07 c (7.1)	The validity period of the management plan and all documents included must be defined.	04/2008	
17/07 c (7.1.3 b)	A guideline shall be developed for using mechanical equipment.	08/2008	
18/07 c (7.3.6)	Contractors shall be trained in the same way as employees and members.	08/2008	

4.8 Conditions regarding Principle 8

No./Year Indicator	Conditions 2007 for MWD	Dead-line	Status
19/07 c (8.1.2)	The list of monitoring activities including those relevant to legal regulations and important management activities and frequencies of monitoring must be defined.	08/2008	
20/07 c (8.5.1)	Responsibility to summarise the monitoring results must be specified.	08/2008	
26/07 c (8.3.2)	For sales of certified material the certification number of MWD must be included on the sales documentation (invoice and delivery note).	04/2008	
27/07 c (8.3.2)	Any use of the FSC logo and marketing material (brochures, Internet etc.) as well as the declaration on invoices must be submitted to IMO before printing or publishing.	04/2008	

4.9 Advices

No./Year Indicator	Advices for MWD	Status
22/07 a (6.6.1)	Before an additional pesticide (including those for intercrops) will be used, this must be communicated to IMO indicating product name and chemical/active ingredients. Pesticides containing a chemical/active ingredient included on FSC's "highly hazardous" list (FSC-GUI-30-001, downloadable via www.fsc.org) must not be used.	

4.10 Recommendations

No./Year Indicator	Recommendations for MWD	Status
A/07 (10.3.2)	Legal limits for clear cuts according to the Regulation of Forest Harvesting Operations (LY/T1646-2005) should be mentioned in the management plan.	
B/07 (4.2.8)	Appropriate lighter models should replace heavy protection helmets.	
C/07 (5.3.3)	Riparian zones should be taken into account when planning biological corridors.	

5 Summary of the strengths and weaknesses

5.1 List of strengths in relation to the FSC-guidelines

1. All pre-conditions from the pre-evaluation from December 2006 were closed at the main audit.
2. Property and use right of the forests are clear and legal. MWD has clear defined their pool of certification with members and forest properties. The group management system has been established which is sufficient for the initial stage when MWD become certified with limited number of forest properties in its pool. (see 1.1)
3. Management of 'PFEB', the Protected Forest for Ecological Benefit, is included and protected in MWD, primarily with self generated native species, in or near the plantations and along the water courses. Diversity of species in the protected forest areas and within the plantations will be stimulated. (see 1.3)
4. Local communities believe MWD's plantation management will be beneficial to them in terms of income, reduction of soil erosion, better roads, etc. (see 2.4)
5. MWD selects species that allow them to minimize the use of chemical pesticides. Minimal disturbance of the soil in the routine activities such as felling, replanting, and weeding. (see 2.4)
6. A systematic compilation of the flora, including Rare and Endangered species required by FSC certification has been established.

7. Strategies to minimise the use of chemicals are already in place: Restricted use of herbicides, minimal use of pesticides, use of organic fertilizers etc. They can easily be further strengthened and extended. (see 2.2)
8. Measures to reduce the environmental impact of the plantation and processing activities are already in place. These can be further strengthened when necessary.
9. Since the forest bureau will be in charge of the group management that means a well organised organisational and management structure with a good documentation for the group certification will be established with help of staff foresters.

5.2 List of weaknesses in relation to the FSC-guidelines

1. The weak points are mainly regarding diversity of the poplar plantation management which is not yet considered in detail because the main intention until now was the economic aspect. The question of biodiversity and optimal management approaches in relation to it are not yet sufficiently considered. Although many good approaches have been done, none of them has been done systematically or based on a documented plan or procedure.
2. Chemicals, mainly fertilisers, are used in growing agricultural intercrops in the first three years of the young poplar plantation in large quantities and no serious attempts for reduction have been made. The monitoring of the side effects was done not either. This applies in the same way for the lack of diversity in the plantation.
3. Working safety and control of working quality were not considered before the FSC audit. Although new procedures are in place now, it will still take time and efforts to introduce the new concept to all staff and continue the monitoring and the success.
4. Some formal requirements regarding the management plan and its control are not yet fulfilled.

6 Decision for Certification

6.1 Recommendation for certification (audit team)

Considering the entire situation and the conditions listed it is assumed that the company will fulfil the FSC standard completely. Thus, recognition of MWD in the field of Forest Management, group representation and Chain Of Custody is recommended.

November 2007
Wang Dong, co-auditor, national expert
Thomas Papp-Váry, lead auditor



6.2 Positive certification decision

The certificate is issued for the following company and assortments.

Forest company	Assortment	Annual production	Certification FSC
Jiangsu Mingji Wood Development Co., Ltd	Logs, firewood, industrial timber	About 35,000 m ³	IMO-FM/COC-027510

6.3 Authorisation

By authorisation of this report the client accepts the correctness of this report (public and internal part) and obliges himself to follow the relevant FSC standard, to the punctual fulfilment of the conditions and to the consideration of the recommendations.

Contents checked and approved by	
Institute for Marketecology  Institut für Marktökologie Weststr. 51 CH-8570 Weinfelden Tel. +41-(0)71 626 0 626 Fax +41-(0)71 626 0 623	Client
Weinfelden, 28. Dec. 2007	Place, Date
 (Wolfram Kotzurek)	Signature

I. (FM) REGISTRATION FORM (PUBLIC PART)

ENGLISH SUMMARY and BASIC INFORMATION TO BE SUBMITTED TO FSC

Part I: Certification details - to be completed by IMO		
	Template version:	<i>M-templates-en-Jun07 (File name and date)</i>
1.	Registration code	IMO-FM/COC-027510
2.	FSC Standard	IMO generic standard China; downloadable via www.imo.ch
3.	Scope of certificate	Forest Management (FM/COC): Jiangsu Mingji Wood Development Co., Ltd, Xuyi County, Zhejiang Province, China
4.	Type of certificate	group
5.	Report No.	07 2416 02 (audit 30.08.-01.09.2007)
6.	Previous reports with audit dates	pre-evaluation report (confidential) 06 2416 01 (23-24.12.2006)
7.	Auditor(s)	1. Thomas Papp-Váry (lead auditor) 2. Wang Dong (local expert)
8.	Qualification	1. MSc forestry, Forstassessor. Administrative coordinator of Dep. of Forestry and Timber since 2000; lead auditor since 2002 2. BSc Forestry, COC lead auditor for CU since 2005, IMO auditor since 2006

Part II: Company details - to be checked by client		
1.	Company name	Jiangsu Mingji Wood Development Co., Ltd
2.	Forest workers (incl. contractors)	40
3.	Latitude/Longitude	N 32°, 22', 25'' / E 118°, 09', 11''
4.	Total number of FMUs in scope of certificate (individual company)	n/a
5.	Number of members (groups)	5
6.	Total managed area of company / group	7100 ha
7.	Tenure	Community owned 7100ha
8.	Total forested area	7100 ha
9.	thereof	2 FMUs 100 - 1000 ha [total area 1331 ha] 3 FMUs 1000 – 10'000 ha [total area 4669 ha]
10.	thereof managed as plantation	6000 ha
11.	thereof managed by natural regeneration	0 ha
12.	thereof managed by replanting	6000 ha (replanting = planted forest = Pflanzung)
13.	thereof protected from commercial timber	a) thereof 1100 ha for conservation b) thereof 0 ha for NTFP or services

	harvesting	
14.	Chemicals and pesticides used	[List product name, active ingredient/chemical, quantity and reason for use] fertiliser; Benfuracarb (carbamate)
15.	Forest Zone	Temperate and subtropical
16.	Species composition	<u>Broadleaf</u> 84% <i>Populus Deltoides</i> / <i>Black America Poplar</i> <u>Conifers & various broadleaf trees</u> 16% <i>Cunninghamia lanceolata</i> / Shamu / Chinese fir <i>Pinus massoniana</i> / Mawei song / Masson pine = Chinese red pine <i>Pinus taiwanensi</i> / Huangshan song / Taiwan pine = yellow mountain pine <i>Cryptomeria japonica</i> / Riben liushan / Japanese cedar and other conifers
17.	Forest products - timber:	031 - Wood in the rough of <i>Populus deltoides</i>
18.	Approximate annual allowable cut by main commercial species	38,000 m ³ <i>Populus deltoides</i>
19.	Basis for annual allowable cut	permanent sample plots and survey
20.	Annual production of main commercial wood species	32,000 m ³ <i>Populus deltoides</i>
21.	Main commercial non-timber products	none
22.	Annual production of commercial Non Timber Forest Products	none
23.	Processing products timber and NTFP	none
24.	High Conservation Value Forests total:	none
25.	High Conservation Values by category:	n/a

Annex: Public stakeholder list

Contact Information	main interest
Local Stakeholders MINGJI	
Xuyi Forestry Administration	
Xuyi Forestry Station	
Xuyi Water Administration	
Xuyi Tax Administration	
Heqiao Forest Station	
Wangdian Forest Station	
Qiuji Forest Station	
Guiwu Forest Station	
Huihe Forest Station	
Xuyi Forest farm	
Xuyi Forestry Association	
Forestry Academy of Jiangsu Province	
Heqiao Farmer	
Wangdian Farmer	
Qiuji Farmer	
Guiwu Farmer	
Huihe Farmer	
National Stakeholders	
Technical Director, FSC China	
WWFC China, Room 1609, Wenhua Gong, Beijing Working People's Culture Palace (Laodong Renmin Wenhua Gong Dongmen), Beijing, 100006	Environmental
Forest Program, WWF-China	Environmental
Shanghai Chance Management Consultant Corporation	Economic
Forestry Managing Headquarter, APP China	Economic
Chinese Green Times	Social
Forest Program, WWF-China	Environmental
Division of Scientific and technological, Sichuan Provincial Forestry Department	Social
Forest Program, WWF-China	Environmental
Division of Bilateral Cooperation, International Forestry Cooperation Centre, SFA	Social
China Association for NGO Cooperation	Social
Guangxi Provincial Forestry Department	Social
Forest Program, WWF-China	Economic
Research Institute of Forestry Policy and Information, CAF	Environmental
Chinese Timber Distribution Association (CTDA)	Economic

International Network for Bamboo and Rattan	Environmental
Division of International Cooperation, CAF	Economic
IKEA China	Economic
Heilongjiang Provincial Forestry Academy	Environmental
Heilongjiang Provincial Forestry Department	Environmental
Beijing Forestry Society	Environmental
Institute of Sociology, Chinese Academy of Social Sciences	Social
Beijing Green Panel Consulting Ltd.	Economic
Research Institute of Forestry Policy and Information, CAF	Economic
Zhejiang Forestry University	Social
Research Institute of Forestry Policy and Information, CAF	Environmental
Beijing Forestry University	Environmental
WWF-China	Environmental
Ph.D, CAF	
SFS	
Beijing Forestry University	
IUCN	
WWF-China	Environmental
Chinese Green times	Environmental
Chinese Academy of Social Sciences	Social
APP	Economic
APP Marking Shanghai	Economic
Greenpeace	Environmental
Greenpeace China, Unit 2, 19/F, Block E, Lanchou Famous Building Jiqingli, Chaowai Street, Chaoyang District, Beijing, 100020	Environmental
Forestry policy coordinator TNC	Environmental
Forest Trends	
TFT	Environmental
CTDA	
Friends of Nature	
China Council, CCPEF	
Department of Accreditation, CNCA	
Assistant manager, Stora Enso	Economic
Office assistant, Stora Enso	Economic
China Project Director, Tropical Forest Trust	Environmental
Senior Buying Director-Wall & Flooring,China head office, B&Q	Economic
Ph.D, Research Institute of Forestry Policy and Information, CAF	
China Representative, Tropical Forest Trust	Environmental
GreenWood Resources	
Greenpeace	Environmental