



Sustainable Forest Management in Taiwan

- an E-NGO's Perspective



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Taiwan Forest

- Formosa
- Forest Coverage = 58.5 % (1995)
- Accounting for 2.1 million hectares
- The Harbor of Lives



Sustainable Forest Management in Taiwan

Ecosystem Services

- Natural Reserves
- Recreation
- Water Conservation
- Soil Conservation

Utilisation

- Timber
- Timber byproduct



History of Taiwan Forest Industry

Time	Description
1895-1958	Afforestation for economic development (Japan Colonial + KMT early ruling period)
1959-1974	Balance between the efforts for national protection and timber production : annual timber harvesting maximum is 1.5-2 million m ³ (account for 8,700-11,700 ha of forests)
1975-1988	Focus on national protection : annual timber harvesting maximum is 1-1.5 million m ³ (account for 5,800-8,700 ha of forests)
1989	Taiwan Forestry Bureau, once a government enterprise, became a government agency ; annual timber harvesting maximum is 0.5 million m ³ (account for 2,900 ha of forests)
1992	Ban on logging in the national primary forest
1992-2001	Enforcing the forest's function on national protection ; annual timber harvesting maximum is 0.2 million m ³ (account for 1,200 ha of forests)
2001-Present	Almost not using forest resources, except for scientific purpose



Taiwan is Vulnerable

- 73% of the areas and population in Taiwan are exposed to at least 3 natural hazards (Dilley et al., 2005).
- Vulnerable to typhoons, floods, and mudslides.
- After the typhoon Morakot in 2009, the total collapsed areas in Taiwan increased by more than 486,00 ha.

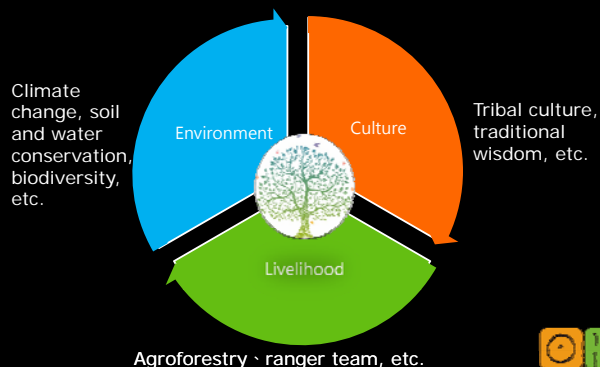


Natural vs. Man-Made Afforestation

- Nature will do the work.
- Priorities are given to vulnerable areas and where there are communities.
- Forest should be managed with the combination of the above methods.



Multidimensional Values of Forest



Is Forest-Oriented Livelihood Possible?

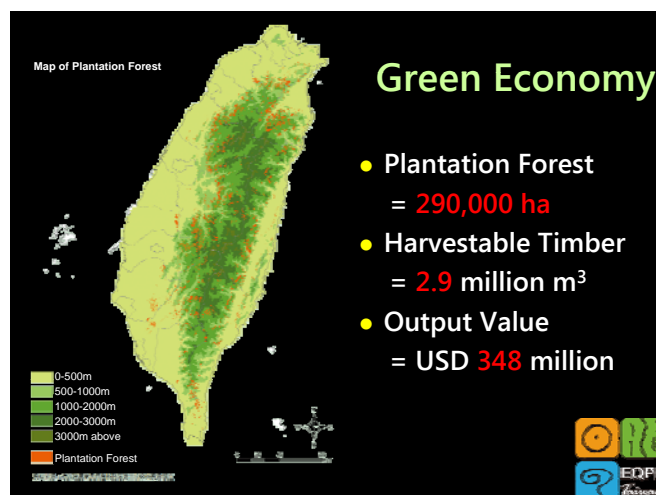
	Existing Forest Area	Emerging Forest Area
Existing Employment	Management and Recreation (limited job creation, non profession)	New Plantation and Nursery (short term, limited job creation)
New Employment	Ranging, Thinning, and other Byproducts (Forest Industry is underdeveloped)	Forest Industry?



Our Lost Forest Industry



Green Economy



The Potential and Opportunity

- Afforestation is unprofitable. The profit for each ha is less than USD 33.
- Labor-intensive industry. We can create 14,000 decent green jobs if we utilise the 2.9 million m³ harvestable timbers.



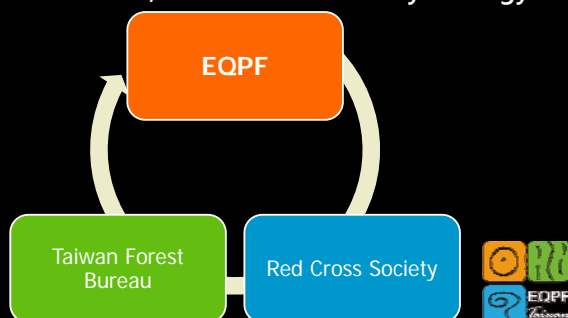
The Road of Recovery after Disasters

- Difficulties for Private Sector Afforestation. We Need New Strategy for Afforestation.
- The work of recovery just began. Environmental and humanitarian organizations are seeking for a sustainable solution.
- Just like the Civilian Conservation Corps (CCC).



Good will with less experience

- We took afforestation and livelihood into consideration, as our main recovery strategy.



Forest Restoration in Disaster Area

- 30th July 2010, Taiwan Forestry Bureau and the Red Cross Society of the Republic of China signed the M.O.U of Forest Restoration in Disaster Areas.



What We Want to Do in Taiwan

- Typhoon Morakot in 2009 devastated our environment and people
- Combination of Environment Conservation, Humanitarian Aid, and Livelihoods

Afforestation

- Livelihoods
- Forest Ranging
- Environment Data Collection

Education

- Promote Forest Related Knowledge
- Disaster Prevention Centers
- Eco-Tour

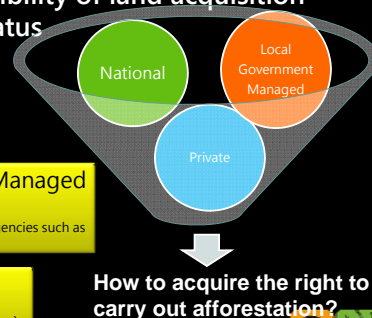
How We Do It

- Evaluate the possibility of land acquisition and utilization status

National Forest
(including rented afforestation land)

Local Government Managed Forest
(the forest owned by the public agencies such as city government)

Private Forest
(including aboriginal reserves)



How to acquire the right to carry out afforestation?

Outcome

Location	Area (ha)	Progress
Qishan (No. 7 Forest Compartment), Kaohsiung City	11.7	Planting completed; The 2 nd year of forest tending
Laonong River (No. 56 Forest Compartment), Kaohsiung City	32.3	Seedling spread completed
Guanshan 1 / 2, (No. 20 Forest Compartment), Taitung County	55.1	In progress
Alishan (No. 9 Forest Compartment), Chiayi County	25.1	
Dapu (No. 38 Forest Compartment), Chiayi County	15.0	
Yujing (No. 70 Forest Compartment), Tainan City	20.0	
Total	159.2	



An Innovative Cooperation between Government and Civil Societies

- New Model
- Clarify the afforestation goals, seeking benefit maximization of the public goods



Discussion

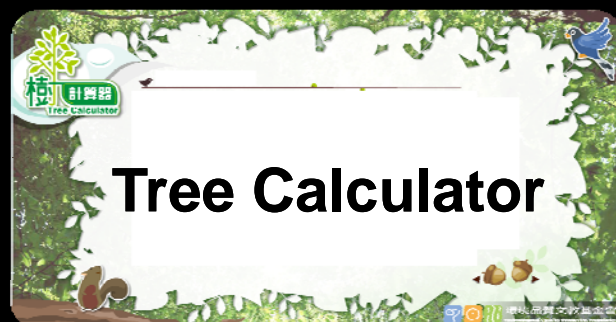
- Can sustainable forestry support communities' livelihoods?
- How do the local communities engage in afforestation projects?
- Is forest industry certainly bad?



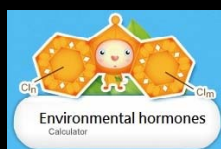
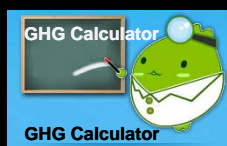
Tree planting experiential education



Values & Function of Forest



Develop Useful Quantitative Tools in Tree , CO₂ , Water and Environmental Hormones



Thanks for Listening!!

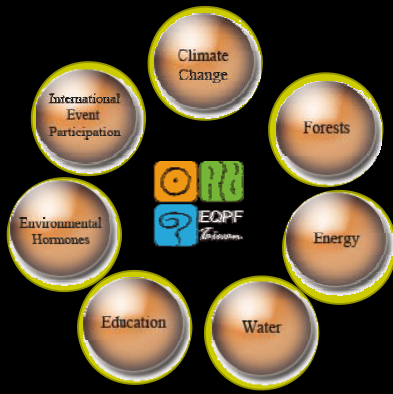
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Our Works

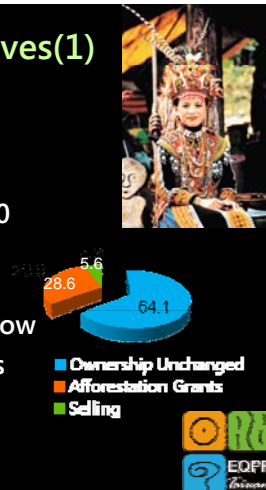


How We Do It(2)

- Land Trust Model. Purchase lands for Afforestation.
- Community Support Forestry Survey: Unchanged ownership (64%) vs. Willing to sell the lands (5%)
- Internal discussion with The Red Cross Society : Acquire long-term ownership of the land is not an option.
- Collaboration with public agencies. Government for lands, Public for efforts.

Aboriginals Perspectives(1)

- Wutai Township, Pingtung County, Taiwan
- 485 valid surveys out of 700 surveys being distributed
- 73.0% favor afforestation
- 63.9% of the lands are fallow
- 84.5% willing to be hired as rangers



Aboriginals Perspectives(2)

- In the findings, the unemployment rate is as high as 57.7%, and for those people are employed, 37.3% of them are freelancers. 75% of the people have a monthly revenue less than \$333.
- Most of the owners of private forest lands are not willing to sell the land.
- 64% of them preferred not to change the ownership. Only 5% of the ownerships are willing to sell the lands.

M.O.U of Forest Restoration in Disaster Areas

- Article 1 Council of Agriculture agree to :
 - (1) The Red Cross can hire disaster area's residents and professional groups to reforest in the national forestland.
 - (2) In the preceding paragraph, the Council of Agriculture has provided a total area of 200 hectares of forestland. The Council of Agriculture will provided the land after assessing the geological stability within 3 years.
- Article 2 Two parties agree to :
 - (1) Two parties will focus on the reforestation , and the actual reforestation starts in 2010 and end in 2015.
 - (2) Set up a overarching goal, but sign afforestation contracts case by case.

Afforestation Contract

- Stating the subject, responsibility and obligation of afforestation
- Article 11, If an afforestation contract was being terminated or failed to make any renewal, Party B would return the afforestation land to Party A. The land should be return with the current facilities that have been approved. Party B cannot require any compensation. If, because of law alternation, Party B earned any rights on the afforestation land, this condition would not be limited by the previous stipulation.
- Hold the possibility of acquiring carbon credits or any other related rights in the future