



ボルネオ島サバ州からの報告



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サバ州

- 熱帯降雨林気候
- 気象変動が少ない(Land Below Wind)
- きわめて高い生物生産性
- 面積7.37万Km²
- 人口約250万人
- 多民族多宗教
- 生物生産のインキュベーター
- メガダイバーシティ





サバ州の開発

- 戦前の森林伐採方法：100年サイクル
- 1973年、森林率86%
- 1978年、伐採量1,329万m² 60%が日本へ（戦前60年間の合計伐採量をはるかに超える量）
- 現在の森林率57%
- プランテーション開発：サトウキビ、タバコ、ゴム、ココナッツ→アブラヤシ
- 原油、ガス開発

ボルネオ生物多様性・生態系保全 (BBEC)

プログラム

2002年2月 - 2007年1月

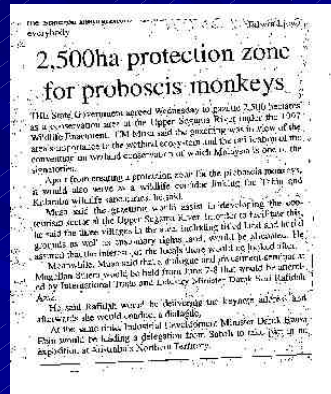
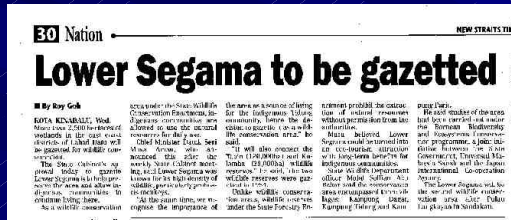
- 目的：総合的、持続的な保全手法を確立する。
- サバ州政府、サバ大学、及びNGOが合同で実施。
- 国際協力機構（JICA）支援。
- 4コンポーネント（研究教育、公園管理、生息域管理、普及啓発）



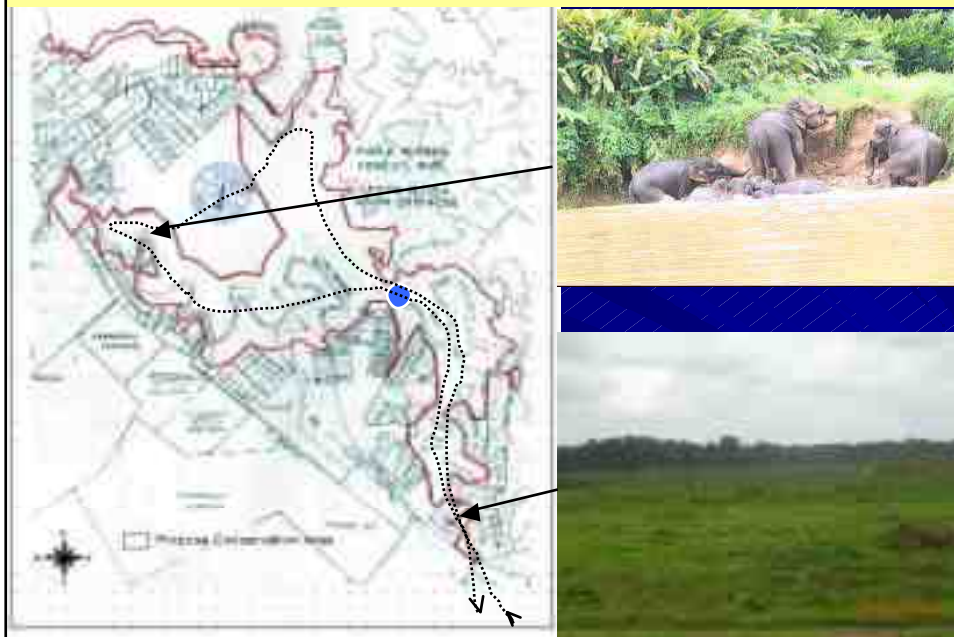
野生生物生息域管理コンポーネント

- **目的**：対象地域において野生生物生息域管理の総合的手法を確立すること。
- **対象地域**：タビン、クランバ野生生物保護区とその周辺地域
- **主務機関**：サバ野生生物局
- **実施機関**：森林局、土地管理局、キナバタンガン郡庁、その他。

セガマ河下流域野生生物保全区設立 州政府閣議によって承認



セガマ側下流域のボルネオゾウ移動ルート



キナバタンガン河下流域

- 不適切な開発による河川氾濫の増加
- 河川汚染、多様性の減少
- プランテーション労働者
- 非合法労働者
- 小規模プランテーション



2005年2月撮影

ボルネオゾウの移動ルートを分断するアブラヤシプランテーション開発



2005年ボルネオゾウ孤児救出



サバ州における アブラヤシプランテーション開発

年	アブラヤシ農園 (ha)	国土割合 (%)	年間増加率 (%)	年間増加面積 (ha)
1984	160,507	2.21		
1994	452,485	6.24	10.92	29,198
2004	1,165,412	16.07	9.92	71,293

出典：WWFマレーシア発表

年	アブラヤシ農園 (ha)	国土割合 (%)	年間増加率 (%)	年間増加面積 (ha)
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出典：WWFマレーシア発表

[illegible]

Japan keen on joint biofuel research: PM

Journal: *Journal of Interpersonal Violence*
Volume: 28
Issue: 10
Pages: 2000-2015
Year: 2013

the authors should be congratulated for such a comprehensive effort to review efforts to improve the patient's treatment and control of the disease.

These items were all judged appropriate and useful by the panel. The panel also agreed that the items should be included in the final checklist.

By 1993, Bulgaria and Japan were among countries whose ties to the Balkans included all of the elements being tested: nuclear safety, the rule of law, and a building on Turkey's role as a major ally's ally. Trade and tourism, culture and the church were

The former laboratory is used as a teaching laboratory, used to support early environmental studies, introducing an awareness of the scientific method to the general public.

is working with Singapore's former Prime Minister Lee Kuan Yew and a lot of the money is in the American investment market.

Following the September 11 terrorist attacks, the security in the tropical region that the Japanese company was involved in was improved by the Indonesian government's police, and Japanese business efforts in diversifying among companies within the region have been increasing.

The program received the highest rating, 4.0, for the content of the information on tobacco use and for the quality of the information.

© 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 105–112

to be the only one in the literature. However, further work is required to establish such a relationship and show the relevance of some nonclassical models using alternative and more realistic modelling and simulation techniques. Finally, it is interesting to find another source of agreement.

During the working days, the presence of a simulated disease episode

gittioni's provided that, from time to time, the Home Affairs and the internal Security's committees would discuss Italy's policy, taking account of the need to avoid any overlap with the other countries.

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² The specific case of the 1990s was that, at the beginning of the century, there was limited access to the world market's goods without a free-trade environment.

The three interpreters and their staff discussed the great cultural differences between the European and American ways of thinking and the different ways of doing things.

[illegible]

Malaysia
 Korea 90
 Japan 100
 Mexico

PHOTO: *Shelley is seen from left with her husband, John, and their 10-year-old son, John, Jr., in front of the family apartment building in the Bronx. Shelley, who married John in 1970, was pregnant with John Jr. when she was 16 years old. Her husband is a 26-year-old black man who works as a janitor.*

Washburn's research suggests that parents do more to help their children with school work when the child is doing poorly than when the child is doing well. This is true for both parents and teachers. Washburn's research also suggests that parents and teachers are more likely to help their children with school work when the child is doing poorly than when the child is doing well. This is true for both parents and teachers.

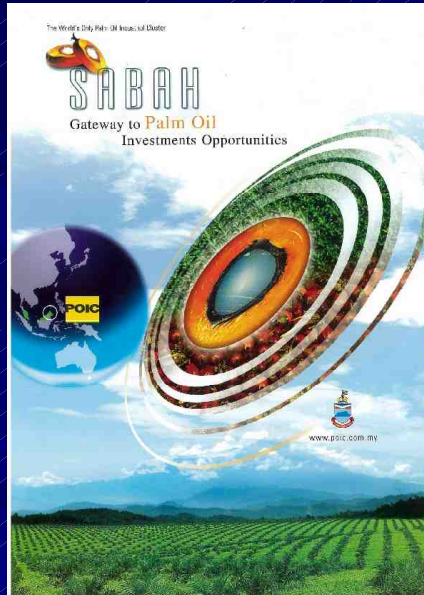
Open a fully sealed can of the product and remove the cap of the jar and contents should be ready for use. See the product label.

[illegible]

Source: U.S. Census Bureau, *Marriage, Divorce, Remarriage in the 1990s*, Washington, D.C., 1992.

There is also a small section on the history of the city, which is a good starting point for those who want to know more about the city's past.

POIC ヤシ油コンビナート



サバ州におけるヤシ油生産(トン)

港	1994	1998	2003
サンダカン	468,306	918,569	2,167,249
ラハダト	411,758	1,132,982	2,167,495
クナック	46,257	44,557	149,317
タワウ	210,029	241,889	399,039
合計	1,136,350	2,337,997	4,833,100

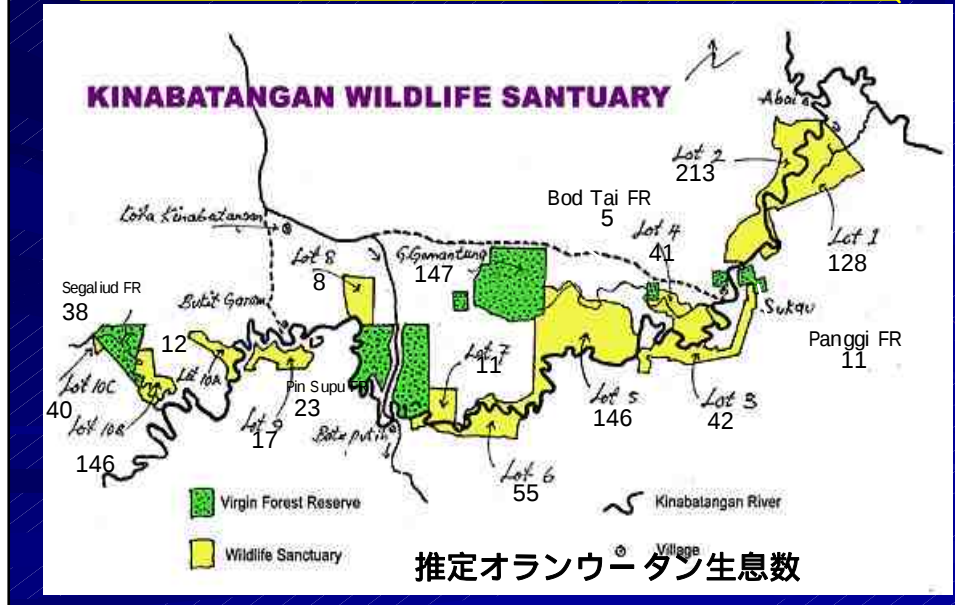
出典：IJMプランテーション発表

2003年、

サバ州における年間アブラヤシ搾油能力2,230万トン

(CPO生産能力452万トン)

キナバタンガン河周辺アブラヤシプランテーション開発によって分断された保護区



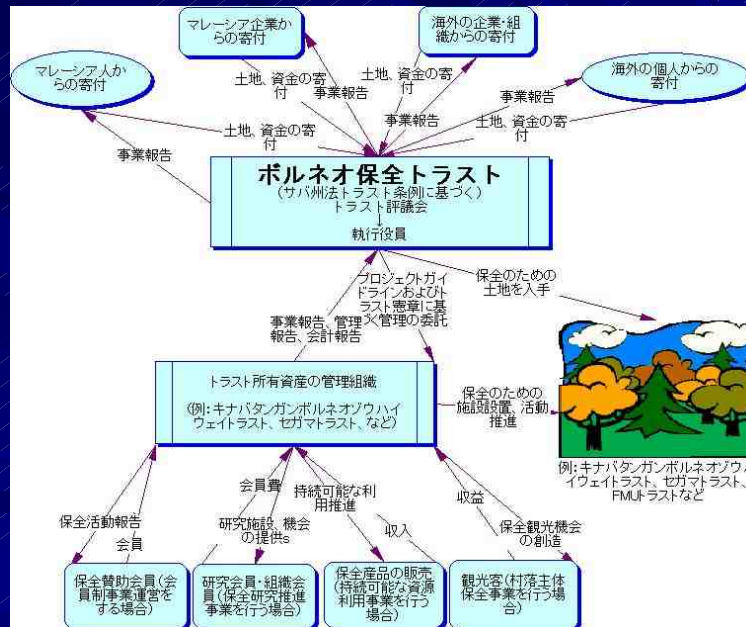
バイオディーゼルへの期待

- 2005年12月、RM 1,400 / トンCPO
(聞き取り推定粗利率40 - 50%)
- 2007年1月、RM 2,000 / トン
- 20トンFFB生産 / ヘクタール / 年
- 4トンCPO生産 / ヘクタール / 年

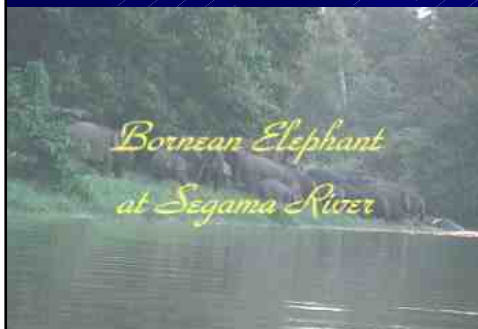
失う可能性があるもの。

- 10トンの炭素固着 / 熱帯林ヘクタール / 年
- 生物多様性指標で計る持続可能な開発、有限地球生態系と共生する人間社会

ボルネオ保全トラスト



有限地球生態系と共存するために



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