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## ABREVIATION

Portuguese		English	
<b>ADAPEC</b>	Agencia de Defesa Agro-pecuaria	Agriculture/Livestock Agency	Defense Agency
<b>ABCAR:</b>	Associação Brasileira de Crédito e Assistência Rural	Brazilian Association of Credit and Rural Assistance	
<b>APA-TO:</b>	Alternativas para a Pequena Agricultura no Estado do Tocantins	Alternative for Small Agriculture in Tocantins State	
<b>IA</b>	Inseminação Artificial	Artificial Insemination	
<b>AHITAR</b>	Administração da Hidrovia Tocantins Araguaia	Tocantins-Araguaia Management	Hydroway
<b>BASA:</b>	Banco da Amazônia	Bank of Amazon	
<b>B.B.</b>	Banco do Brasil	Bank of Brazil	
<b>BIRD</b>	Banco Internacional de Reconstrução e Desenvolvimento	International Bank of Reconstruction and Development	
<b>BID</b>	Banco Interamericano de Desenvolvimento	Inter-American Development Bank	
<b>BNDES:</b>	Banco Nacional de Desenvolvimento Social	National Bank of Social Development	
<b>BOT</b>	Construir, Operar, Transferir	Build, Operate, Transfer	
<b>CAMPO:</b>	Companhia de Promoção Agrícola	Agriculture Promotion Company	
<b>CASETINS:</b>	Companhia de Armazéns Gerais e Silos do Estado do Tocantins	General Storehouse and Silo Company of Tocantins State	
<b>CEASA</b>	Centro Estadual de Abastecimento S.A.	State Center of Provision SA	
<b>CIMI</b>	Conselho Missionário Indigenista	Indian Missionary Council	
<b>CMDR:</b>	Conselho Municipal de Desenvolvimento Rural	Municipal Council of Rural Development	
<b>CODETINS:</b>	Companhia de Desenvolvimento do Estado do Tocantins	Development Company of the Tocantins State	
<b>COEMA-TO</b>	Conselho Estadual de Meio Ambiente-TO	Environmental State Council-TO	
<b>CONAB:</b>	Companhia Nacional de Abastecimento	National Provision Company	
<b>CONTAG:</b>	Confederação Nacional dos Trabalhadores na Agricultura	National Confederation of Agricultural Laborer	
<b>CNA</b>	Confederação Nacional da Agricultura	National Confederation of Agriculture	
<b>CELTINS</b>	Companhia de Energia Elétrica do Tocantins	Electric Energy Company of Tocantins	
<b>CPR</b>	Cédula de Produto Rural	Rural Product Banknote	
<b>CPT:</b>	Comissão Pastoral da Terra	Land Pastoral Committee	
<b>CVDR</b>	Companhia Vale do Rio Doce	Vale do Rio Doce Company	
<b>DATER:</b>	Departamento de Assistência Técnica e Extensão Rural	Department of Technical Assistance and Rural Extension	

<b>DNER</b>	Departamento Nacional de Estradas de Rodagem	National Department of Roads
<b>EAFA:</b>	Escola Agrotécnica Federal de Araguatins	Agricultural Technology School of Araguatins
<b>EMATER:</b>	Empresa de Assistência Técnica e Extensão Rural	Enterprise of Technical Assistance and Rural Extension
<b>EMBRAPA:</b>	Empresa Brasileira de Pesquisa Agropecuária	Brazilian Enterprise of Agriculture and Livestock Research
<b>EMBRATER:</b>	Empresa Brasileira de Assistência Técnica e Extensão Rural	Brazilian Enterprise of Technical Assistance and Rural Extension
<b>EIA/RIMA</b>	Estudo sobre Impacto Ambiental/Relatório de Impacto sobre o Meio Ambiente	Environmental Impact Study/Impact Report on the Environment
<b>EXIMBANK</b>	Banco de Importação e Exportação do Japão	Japan Export and Import Bank
<b>FAO</b>	Organização Internacional de Alimentos e Agricultura	International Organization of Food and Agriculture
<b>FAET:</b>	Federação da Agricultura do Estado do Tocantins	State Agriculture Federation of Tocantins
<b>FAT:</b>	Fundo de Apoio ao Trabalhador	Laborer Support Fund
<b>FECOMERCIO</b>	Federação do Comercio do Estado do Tocantins	Trade Federation of the Tocantins State
<b>FETAET:</b>	Federação dos Trabalhadores na Agricultura do Estado do Tocantins	Agriculture Laborer Federation in Tocantins State
<b>FGTS:</b>	Fundo de Garantia por Tempo de Serviço	Guarantee Fund for Time of Service
<b>FGV:</b>	Fundação Getúlio Vargas	Getulio Vargas Foundation
<b>FNO:</b>	Fundo Constitucional de Financiamento do Norte	Constitutional Fund of Finance of the North
<b>FIETO</b>	Federação das Indústrias do Estado do Tocantins	Industry Federation of Tocantins State
<b>FINAM</b>	Fundo de Investimento da Amazônia	Amazon Investment Fund
<b>FUNAI:</b>	Fundação Nacional do Índio	Indio National Foundation
<b>PIB</b>	Produto Interno Bruto	Gross Domestic Product
<b>IDH</b>	Índice de Desenvolvimento Humano	Human Development Index
<b>IBAMA:</b>	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis	Brazilian Institute of Environment and Renewable Natural Resources
<b>IBGE:</b>	Instituto Brasileiro de Geografia e Estatística	Brazilian Institute of Geography and Statistics
<b>ICMS:</b>	Imposto sobre Circulação de Mercadorias e Serviços	Tax on Goods and Services Circulation
<b>INCRA:</b>	Instituto Nacional de Colonização e Reforma Agraria	National Institute of Colonization and Agrarian Reform
<b>INSS</b>	Instituto Nacional de Serviços Sociais	National Institute of Social Services

<b>IPEA</b>	Instituto de Pesquisa Econômica Aplicada	Institute of Applied Economy Research
<b>ITERTINS:</b>	Instituto de Terras do Estado do Tocantins	Land Institute of Tocantins State
<b>JICA</b>	Agência de Cooperação Internacional do Japão	Japan International Cooperation Agency
<b>MAA:</b>	Ministério da Agricultura e do Abastecimento	Agriculture and Provision Ministry
<b>MERCOSUR:</b>	Mercado Comum do Sul	Common Market of the South
<b>MST:</b>	Movimento dos Sem Terra	No Land Movement
<b>MT</b>	Ministério dos Transportes	Transport Ministry
<b>NATURATINS</b>	Instituto Natureza do Tocantins	Nature Institute of Tocantins
<b>NPA</b>	Núcleo de Produção Agrícola	Agriculture Production Nucleus
<b>ODA</b>	Assistência de Desenvolvimento Oficial	Official Development Assistance
<b>OECE</b>	Fundo Ultramar de Cooperação Econômica	Overseas Economical Cooperation Fund
<b>ONG's</b>	Organizações Não Governamentais	NGO
<b>PCS</b>	Programa Comunidade Solidária	Solidary Community Program
<b>PEDA-TO</b>	Programa de Desenvolvimento Agrícola do Estado do Tocantins	Agriculture Development Program of Tocantins State
<b>PESMITO</b>	Pesquisa de Saúde Materno-Infantil do Tocantins	Maternal-Infantile Health Research
<b>PGPM</b>	Política de Garantia de Preço Mínimo	Guarantee Policy of Minimum Prices
<b>PNUD</b>	Programa das Nações Unidas para o Desenvolvimento	Development Program of the United Nations
<b>PMDR:</b>	Plano Municipal de Desenvolvimento Rural	Municipal Plan of Rural Development
<b>PROCERA:</b>	Programa Especial de Crédito para a Reforma Agrária	Special Credit Program for the Agrarian Reform
<b>PRODECER</b>	Programa de Desenvolvimento do Cerrado	Cerrado Development Program
<b>PRODEPEC</b>	Programa de Desenvolvimento Pecuário	Livestock Development Program
<b>PRODIAT</b>	Programa de Desenvolvimento Integral do Araguaia-Tocantins	Integral Development Program of Araguaia-Tocantins
<b>PRONAF:</b>	Programa Nacional de Apoio à Agricultura Familiar	National Program for the Familiar Agriculture Support
<b>RURALTINS:</b>	Instituto de Desenvolvimento Rural do Estado do Tocantins	Rural Development Institute of Tocantins State
<b>SDR:</b>	Secretaria de Desenvolvimento Rural	Rural Development Bureau
<b>SEBRAE:</b>	Serviço Brasileiro de Assistência a Micro e Pequena Empresa	Brazilian Assistance Service for Micro and Small Enterprises
<b>SEDUC</b>	Secretaria da Educação	Bureau of Education
<b>SEFAZ</b>	Secretaria da Fazenda	Bureau of Treasury

<b>SEI</b>	Sistema Estadual de Informática	State Computation System
<b>SEPLAN</b>	Secretaria do Planejamento e Meio Ambiente	Bureau of Planning and Environment
<b>SEPRO</b>	Secretaria de Estado da Produção	State Bureau of Production
<b>SENAR:</b>	Serviço Nacional de Aprendizagem Rural	National Service of Rural Lecture
<b>SESAU</b>	Secretaria da Saúde	Bureau of Health
<b>SESC:</b>	Serviço Social do Comércio	Social Service of Trade
<b>SESI:</b>	Serviço Social da Indústria	Social Service of Industry
<b>SETAS</b>	Secretaria do Trabalho e da Ação Social	Bureau of Labor and Social Action
<b>SETO</b>	Secretaria de Transportes e Obras	Bureau of Transport and Public Works
<b>SNCR</b>	Sistema Nacional de Crédito Rural	National Rural Credit System
<b>SINCTUR</b>	Secretaria de Indústria, Comércio e Turismo	Bureau of Industry, Trade and Tourism
<b>STR:</b>	Sindicato de Trabalhadores Rurais	Rural Laborer Syndicate
<b>SUDAM</b>	Superintendência de Desenvolvimento da Amazônia	Superintendence of Amazon Development
<b>SUS:</b>	Sistema Único de Saúde	Unique Health System
<b>TR</b>	Taxa Referencial	Reference Tax
<b>TJLP</b>	Taxa de Juro de Longo Prazo	Long Term Interest Rate
<b>UEP:</b>	Unidade de Execução de Pesquisa e Desenvolvimento de Tocantins	Execution Unit of Research and Development in Tocantins
<b>UFG:</b>	Universidade Federal de Goiás	Federal University of Goiás
<b>ULBRA</b>	Universidade Luterana Brasileira	Brazilian Lutheran University
<b>UNDP</b>	Programa de Desenvolvimento das Nações Unidas	United Nations Development Program
<b>UNITINS:</b>	Universidade do Tocantins	University of Tocantins
<b>USP:</b>	Universidade de São Paulo	University of São Paulo
<b>ZEE</b>	Zoneamento Econômico Ecológico	Economical-Ecological Zoning
<b>ZPE</b>	Zona de Processamento de Exportação	Exportation Processing Zone

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# CHAPTER 1 INTRODUCTION

## 1.1 Preface

The State of Tocantins, located in the north region of Brazil, got independent from the State of Goiás in 1989, becoming the newest State of the Country. Since its independence, the government is been carrying out enormous efforts to activate its economy. As part of these efforts, the Government of the Tocantins State has requested to the Government of Japan the elaboration of the Integrated Development Master Plan of Agriculture and Livestock for the whole State, which culminated in the elaboration of the study related to the “Master Plan”, carried out between 1997 and 1998. This study encompasses the Promotion of Sustainable Agriculture, Improvement of the Productive Structure in the Agricultural Sector, Development of Specific Sectors and Regional Development aiming at Activating the Regional Economy, Introducing the Sustainable Agriculture, Minimizing the Regional Differences, and Preserving the Environment.

The Government of Tocantins State has attributed to the North Region, due to the fact that it has large areas of fertile land compared to the rest of the State and also due to the privileged geographic location concerning to the transportation of products because of the existence of the North-South railway, high priority within the Integrated Development of the Agricultural Sector. Another fact that contributed for this prioritization is the existence of the Extreme-North Region within the North Region limits, with its high concentration of small-scale producers and their unprivileged conditions. Therefore, the elaboration of a development plan for the North Region, considering its countless social problems on one hand, and the great agricultural potential on the other hand, could in the future transform the region in a model for the elaboration of other development programs for other regions, along with the effective utilization of its potentiality and the solution of its social problems.

Under these circumstances, the Government of the Tocantins State has requested to the Government of Japan in 1998, through the Federal Government of Brazil, the study for the elaboration of an Integrated Development Master Plan of Agriculture and Livestock in the North Region of the Tocantins State (Master Plan and Feasibility Study). As a response for this request, the Government of Japan sent a JICA Preliminary Mission, in November of 1999, headed by Mr. Masahito Sato that culminated with the signature of the Scope of Works in December 6<sup>th</sup> of 1999.

Based on this Scope of Works, JICA decided to dispatch a Study Team, and the Study Team carried out the Study in two phases in 2000 divided in works realized in Brazil and others in Japan. The works in Brazil were realized in two parts: from 16<sup>th</sup> of April of 2000 to 12<sup>th</sup> of September of 2000 and from October of 2000 to January of 2001. The results of these two phases culminated in the Master Plan and the Feasibility Study of the Priority Areas, that are detailed in the present report.

## 1.2 Objectives of the Study

The objectives of the present Study are as follows:

- 1) To elaborate an Integrated Development Master Plan for Agriculture (“Master Plan”) and the Feasibility Study of priority areas in the North Region of the Tocantins State, in the Federal Republic of Brazil, with the promotion of the agriculture and livestock taking into



consideration the environmental conservation, the consolidation of the productive structure, and the improvement of life conditions in the rural zone.

- 2) To instruct and perform technology transfer about the study and planning methodologies, to be utilized in all the sectors, to the Brazilian counterparts.

## 1.2 Study Area

The Study Area encompasses the North region of the Tocantins State (38 municipalities in a 37,000 km<sup>2</sup> area). However, for the studies about the commercialization and market economy of agricultural products, other regions outside the Study Area shall also be considered.

## 1.3 Scope of the Study

The study shall be carried out during two Japanese fiscal years. The division into phases and the main contents of each phase are presented as follows.

### (1) Phase I (April to October 2000)

#### 1) Work in Brazil (April to September in 2000)

- Collection, Revision and Analysis of existing relevant data and information;
- Field Survey (Natural Conditions, Environmental Conditions, Socio-Economic Conditions, Livestock and Animal Health, Soil and Cultivation Conditions, Technical Extension, Rural Society and Organization);
- Studies on Market and Commercialization (Sub-contracted);
- Analysis of Development Constrains and Potentials;
- Discrimination of each Municipality;
- Studies on Rural Society (Sub-contracted);
- Formulation of a Development Scenario;
- Accomplishment of the 1st Technical Transfer Seminar;
- Elaboration of the Progress Report (1).

#### 2) Work in Japan (October in 2000)

- Presentation of the Results of the Phase I Work in Brazil;
- Analysis of the Results of the Phase I Work in Brazil;
- Elaboration of the Agriculture and Livestock Development Plan for the North Region (Definition of Development Goals and Strategies, Identification of the Socio-Economic Development Structure and Beneficiaries, Definition of Development Zoning, Elaboration of a List of Programs by Municipality, Selection of Priority Areas);
- Elaboration of the Interim Report;
- Preparation of the 2nd Technical Transfer Seminar;
- Preparation of the Environmental Study for Subcontracting.

### (2) Phase II of the Study (November in 2000 to March in 2001)

#### 1) Work in Brazil (November in 2000 to January in 2001)

- Explanation and Discussion of the Interim Report;
- Accomplishment of the 2nd Technical Transfer Seminar;
- Collection of Complementary Information;
- Revision of the Programs for each Municipality;
- Evaluation of the Selected Priority Areas for the elaboration of projects;
- Feasibility Study for the Priority Areas;
- Elaboration of the EIA for the Priority Areas (Sub-contracted);
- Elaboration and Discussion of the Progress Report (2).

2) Work in Japan (February to March in 2001)

- Presentation of the Results of the Phase II of the Study in Brazil;
- Analysis of the Results of the Phase II of the Study in Brazil;
- Evaluation of the Institutional and Budgetary Measures necessary for the accomplishment of projects and investment promotion;
- Evaluation of the Preliminary Environmental Monitoring Methodology for the accomplishment of projects in priority areas;
- Evaluation of Priority Projects;
- Elaboration of the Draft Final Report;
- Preparation of the 3rd Technical Transfer Seminar.

(3) Explanation of the Draft Final Report (June in 2001)

- Explanation and Discussion of the Draft Final Report;
- Accomplishment of the 3rd Technical Transfer Seminar.

(4) Elaboration of the Final Report (August in 2001)

Elaboration of the Final Report taking into consideration the comments carried out by the Government of Tocantins about the Draft Final Report.

1.5 Mission Members and Counterparts

The Mission Members and respective counterparts are as follows:

Discipline	Name	Counterpart	
		Name	Organization
Leader / Regional Development	SATORU KIDO	Nivaldo Mendonça da Paixão Félix Valois Bezerra	SEPRO SEPLAN
Environment	MASAYUKI HONJO	Alexandre Rodrigues Ricardo Dias Gonzalo Vasques José Roberto	NATURATINS SEPLAN SEPLAN RURALTINS
Agricultural Economy	SHOUSUKE SUENAGA	Nivaldo Mendonça da Paixão Décio Fetti	SEPRO RURALTINS
Agricultural Processing and Commercialization / Projects Evaluation	EIITI KUROKAWA	João Lúcio Félix Valois Bezerra	SEPRO SEPLAN
Cattle Husbandry / Animal Health	TOSHIKAZU NAGAMITSU	Erika Jardim	SEPRO
Land Use / Production Infrastructure	LYRIO MASSARU NAKASE	Gonzalo Vasques Lindomar Santos	SEPLAN SEPLAN
Agriculture / Soils	HIROYASU ONUMA	João Gomes	RURALTINS
Technical Assistance	HIROSHI IKEDA	João Gomes	RURALTINS
Rural Society and Organization	MEIRE C. PEREIRA	Carmem Roseli C. Menezes	SEPLAN
Coordination	IONE KOSEKI	Nivaldo Mendonça da Paixão Félix Valois Bezerra	SEPRO SEPLAN

## CHAPTER 2 SOCIO-ECONOMICAL BACKGROUND

### 2.1 General Profile of Brazil

The Federative Republic of Brazil, the largest country in South American countries (ranked in the 5th at the world level), covers an area of 8,512,000 km<sup>2</sup>. The territory is located between 5°16' latitude North and 33°45' latitude South and between 34°47' and 73°59' longitude West. The climate is classified as tropical forest zone (northern part), semi-arid zone (northeastern part), and temperate zone (southern part).

According to the Brazilian Institute of Geography and Statistics in 2000 (IBGE), the country account a population of 169 million, of which urban population represented 138 million (81%) and 32 million (19%) in rural area. Population of Brazil has been growing at a rate of 1.93% by annum during the period from 1996 to 2000. The population is concentrated in big metropolis such as São Paulo, Rio de Janeiro and Belo Horizonte. And the states, which include those cities, have 42.6% population of entire population of Brazil. The average population density of Brazil is 19.2 p /km<sup>2</sup>.

Another demographic data of the country are life expectancy at birth: 67.6 years, infant mortality rate: 42 per 1000 live births, and total fertility rate: 2.2. In addition, basic social indicators such as primary school enrollment and adult literacy rate aged 15 and above are 81% respectively. The average of HDI value for Brazil is estimated to be 0.74. HDI vary according to the locality. The highest states of that are federal district of Brasilia and Rio Grande do Sul State. On the other hand, Piaui state and Maranhão state indicate lowest HDI.

The Federative Republic of Brazil is divided administratively into the federal district of Brasilia and 26 states and these federal district and states are integrated into five regions (North, Northeast, Southeast, South and Central-West). Economic predominance of the country is concentrated in the South and Southeast regions where there is a higher level of development in industrial, service and agricultural sectors. By contrast, the North and Northeast regions are under-developed in every socio-economic aspect, and hence regional imbalance and income disparities between the south and the north has been made up as a major agenda to be tackled by the central government over decades.

#### 2.1.1 Economic Trend

##### (1) General Economic Situation of Brazil

Although the Federative Republic of Brazil faced high inflation from late 1980s to beginning of 1990s, an economic reform plan called "Real Plan" which has launched by federal government in 1994 is seem to successfully accomplish to control of high inflation. In the aspect of economic policy, it converted the policy to be based on the market mechanism from the government leading development policy and it moved forward liberalization of economy such as the liberalization of import, the privatization, easing of official restrictions. Therefore, the economy growth recovered and the large amount of external capital flowed into this country by the form of direct investment, portfolio investment. However, exchange policy adapted for the control of the inflation brought various negative factors and got to show the expansion tendency of the foreign trade deficit.

The inflation control policy has begun to present an effect in 1993, smooth economy growth was shown and the GDP growth percentage got 5.9% in 1994. Even so, it undergoes the influence of exchange and financial policy as the inflation restraint plan and Asia and Russian economic crisis. So that the economy growth start to slow down and as for the GDP growth percentage showed 0.1% in

1998. The GDP growth percentage were 0.8% and 4.5% in 1999 and 2000, respectively.

## (2) Inflation rates

Regarding inflation, the financial policy of the government succeeded in restraining the inflation. Also, the exchange rate was corrected with the working capital introduction with high interests, stabilizing the price of the market gradually. The annual inflation percentage in 1993 reached 2,700% but it became stable to 1.7% in 1998. However, Brazil also got influenced from Asian and Russia economic crisis. In the beginning of 1999, Brazil fell into the economic confusion partially then exchange rate changed on a large scale and inflation percentage increased again. Inflationary percentage in 2000 increases with 12,06% per year by wholesale price level and increases with 5,27% by consumption price level.

## (3) Interest rates

To settle down of inflation owing to implementation of the Real Plan, interest rates have been shown a downward but still remains at a high level. Interest rates for major financial sectors as of December for each year after putting the Real Plan are as given below

The Trend of Major Interest Rate (%/year)

	1995/12	1996/12	1997/12	1998/12	1999/12	2000/12
Over/Selic	38.92	23.94	42.04	31.24	18.99	16,19
TR (Reference Rate)	17.32	10.98	16.88	9.29	3.66	1,26
TJLP (Long Term Rate)	17.72	11.02	9.89	18.06	12.50	9,75
TBF ( Basic Rate for Credit )	36.99	22.84	39.25	29.90	20.32	15,64
TBC (Central Bank Rate)	-	23.00	40.92	23.55	18.99	16,13

Source: Central Bank of Brazil

These interest rates are particularly problematic for the agricultural sector because time deposit interest rate, TR interest rate and TJLP interest rate are applied to agricultural financing. The problem remains in the sense that these interest rates are always set higher than the inflation rate to promote savings trend of the people.

## (4) GDP by Sectors

As the table below indicates, the leading sector which covers the major share of contribution to the Gross Domestic Product (GDP) in Brazil is the tertiary sector with 60 % then the secondary and the primary sectors followed. The 3rd industry especially financial subdivision has high connection with inflation rates so that the contribution percentage, which used to have 25% in 1993 (the year of highest inflation rate) decreased to 6.5% in 1998. As the one, which grew instead of these, the communication related business and the construction related business are stretching. Moreover, export promotion plan influenced in the in agricultural subdivision recent years, the contribution percentage to GDP of the agricultural relation subdivision is rising. Following is the contribution percentage changes by sectors.

Share of Contribution to the GDP by Sector (%)

Sectors	1991	1993	1995	1997	1998	1999	2000
Primary	6.9	5.8	8.5	7.5	8.0	7,9	7,5
Secondary	32.0	31.8	34.5	33.1	32.3	33,8	35,8
Tertiary	61.1	67.6	57.1	59.4	59.7	58,3	56,7
Total	100.0	100.0	100.0	100.0	100.0	100,0	100,0

Source: IBGE, Contas Consolidadas para a Nação

From the point of the GDP sector's trend, the economical growth rate during the 88 to 92 shows the stagnated rate. After the beginning of the control of the inflation, in 93, the economical growth came satisfactory. However, from the year of 97, having the influence of the Asian and Russian monetary crisis, the economy enfaced he stagnation. The growth rate during 86 to 98, were only 5%.

## (5) Trade Balance

The international account of Brazil was in the constant deficit. In the period from 1992 to 1994, it changed in the surplus basis. After Real plan started, trade account got to shift to deficit with the rise of Real currency value and the import alleviation plan. Especially because of high Real value, predominance of import rises and import activation grows rapidly. The export growth rate from 1993 to 1997 reached 25 % per year. As for export subdivision, development is seen by the export promotion plan of the federal government but the percentage increased just 8% per year. And also invisible trade account is aggravated, trade deficit increase.

## (6) Trend of Brazilian Trade

### 1) Trade Balances

The trade balance of which show the normal increasing trend until 1994, had converted to the negative balance, because of the expansion of the imported volume. The following table shows trade changes since 1992.

Changes of export and import amount in Brazil (Unit;US\$ million)

	Export	Import	Trading balance
1992	35,793 (100)	20,554 (100)	15,239
1993	38,555 (108)	25,256 (123)	13,299
1994	43,545 (122)	33,079 (161)	10,466
1995	46,506 (130)	49,858 (243)	-3,352
1996	47,747 (133)	53,286 (259)	-5,539
1997	52,990 (148)	59,755 (291)	-6,765
1998	51,120 (143)	57,731 (281)	-6,611
1999	48,011 (134)	49,276 (240)	-1,264
2000	55,086 (154)	55,801 (271)	-715

Source: Boletim do Banco Central do Brasil, 2000

### 2) Changes in export amount by sectors and primary industries

As for export products of Brazil, the exportation of coffee, soybean, cacao, sugar, orange juice, meat are primary agricultural export products. As for industrial product, aircraft, home electronics product, leather product and textile product become main export stuff. Main export places are EU countries, North American continent, Japan and China.

Exportation Value (unit: US\$ 10<sup>6</sup>)

	1993	1994	1995	1996	1997	1998	1999	2000
Primary Products	12.620	15.564	16.787	18.071	17.141	15.668	14.417	14.569
Agricultural Products	10.154	13.064	14.040	14.308	13.206	11.544	10.808	10.575
Mine	2.466	2.500	2.746	3.763	3.935	4.124	3.609	3.994
Secondary Products	25.935	27.981	29.720	29.676	35.010	34.816	32.723	39.020
Wood Products	841	1.066	1.135	1.110	1.698	1.658	1.740	2.121
Industrial Products	25.094	26.915	28.585	28.566	33.312	33.158	30.983	36.899
Others	0	0	0	0	843	656	871	1.497
TOTAL	38.555	43.545	46.506	47.747	52.994	51.140	48.011	55.086

Source: Boletim do Banco Central do Brasil, 2000

## (7) Trends of Brazilian External Debt

The external debt of the Brazil was increased, because of the monetary policies implemented for the stabilizations of the inflation, especially after the implementations of Plano real. The external debt, during the period of 94 to the 98, were increased from US\$ 148,3 billion to 235 billion. These increase

were caused by the finance for the import and for the financed capital in a medium term. The debt by the public sector which account 64% in he year of 94 were reduced to the 41% in the year 98, being meant that the increments of the private sector.

## **2.1.2 Trends of Policy**

### **(1) General Tendencies**

Giving the priorities of the policies of the control of inflation chronicles, the other economical and social policies were affected strongly. From Government's transformation to the reverse-democratization of the country, several types of policies were adapted. Now is in the second stages of Plano real. The policies of Plano real can be characterized by the, stabilizations of the economy with the controlled inflations, Openings of international trade and globalization of the markets, and the decrease of the powers in the federal government, controlled financial policies and the vitalization of the economy for the privatizations of the state companies, and the political reforms.

### **(2) Economic Policy**

As the measures of improvements of the economy, the incentive policies were adapted for the exportable sector, relieving the taxes of exports and the exemption of ICM, and the privatizations of the state companies, bringing external capitals. Also the improvements of the infrastructures were adapted to construct the competitive economical sector, not being nominal competitive dependent to the exchange policies.

To stabilize economy, the Government is adapting the policies that to solve the deterioration of the conditions of the trade balance through the expansion of the exports, and the fiscal policies that it solves the financial debt problems. As the measures of the expansion of the exports, the strengthening the productive sectors were adapted, through the implementations of the public works that makes possible them decrease of the transport costs. The transport cost was a long time the parts fragile of the Brazilian economies, call " I cost Brazil. "

### **(3) Plan Plurianual**

The following are four targets of President Cardoso's second administration PPA from 2000-2003.

- 1) Fiscal equilibrium target; keeping economic growth with stable inflation, imbalance of international payments and social debt
- 2) Growth target; distribution of income without social and regional disparities opportunities for payment and income
- 3) Economic growth with the competition power and improvement of produce-ability; to bring industrial skill up to the level of world market from the aspect of quality, cost and efficiency. And it puts Brazilian economy stabilize in the open economics. As for needed infrastructure, by utilizing a private fund carries forward a system.
- 4) Economic development with environmental consideration

The above four targets contemplate an accomplishment of balanced national economy and re-construction of economic structure of the country with an eye laid on external economic circumstances.

As scenario of macro economy, the targets contain stability of prices (about 3%), maintain of growth rates (about 5%), increase of employment (annual average about 2.7%) and income, enlargement of export, adjustment of finance.

## **2.1.3 Agricultural policies of Federal Government**

### **(1) Outline of Agricultural Policy**

The basic strategies of the agricultural policy are based on: the expansion of the foods production, maintenance of the strategies of the expansion of the exports, promotion of the sustainable agriculture, preservations of the natural resources, and expansion of the opportunities of works. The agricultural policies established the guidelines in these objectives, revising the policies of credit agricultural, the determination of the government's paper in the commercialization areas and of foods supplies, and the interest rates for the activities of agricultural credit. This guideline is based on the uses of the private initiatives.

The agricultural policies are adapting the following measures;

- Decrease of the cost called “Brasil Cost”.
- Decrease of the Interest rates in rural credit, through discounted rate, specially for he small farmers
- Implementation of PROAGRO, Publications of the Bills of Products that makes possible obtaining of the capitals in the deprived initiative.
- Exemption of ICMS for export.
- Decrease of the Administrative Costs that facilitates the Stabilization of the Income of the Farmers.
- Improvements of the Infrastructure of transports, through the modernization.
- In the sector of agricultural credit, the Government is implementing the appropriate policies for each situation, growing up the lines of specific credits.

The government provides low-income farmers for beneficial financing condition through PRONAF, PROGER and special financial plan for reform.

To structure the competitive agriculture, the government had facilitated the receptions of resources of the initiative sectors deprived in the finance market, for not depending on the Government's resources. As examples, were established of the norms called “Soja Verde”, Bill of Rural Producer, etc. Also to adjust the productive chains of the agricultural economy, the Government was established the lines for the credits to enable the participation of Integrator of Aviculture, etc., being used of the lines of credits of FNO.

As the market policies, the Policies of Warranty of Minimum Prices (PGPM) was introduced and as a form of operating PGPM the Federal Government's Acquisitions were adopted (AGF), and the Federal Government's Loan (EGF). In order to stabilize the prices, also the REP was created for the agricultural years of 96/97.

### **(2) Specific Agriculture Policies**

#### **Implantation of the securitization**

To stabilize the policies of Plano real, the measure for the stabilization of the agricultural activities were put on a policy, using the measure of “ Securitization of the debt ” , on which resolve the debt values until the value of R\$ 200.000,00 for farmer. Most of these debts were with the Bank of Brazil, besides other banks in smaller participation. Like this, with this measured, it leaves of the debt of the farmers were resolved, being able to these rural farmers restart his production. They put, problem of the debt of the farmers still continues. The demand of real warranties on the part of the bank system is still one of the impediments for the operations of the agricultural credit. Accompanying the



inadplencias of the farmers, the cooperatives of productions, typical case of the Cooperative of Cotia, one of the largest of last decade was inadplentes. In the part of the cooperatives, the government adopted the lines of denominated specific credits RECOOP. This line of the credit RECOOPS, whose purpose is the restructuring of broken cooperatives.

The destined resource RECOOP was of R\$ 3 billion, that can be destined the resolution of the debt (of the structure associated e/ou).

### **Reform of PGPM and crop storage system**

PGPM was useful to guarantee the stability of the income of the rural farmers and to improve the conditions of commercialization of the products. On the other hand, it also involves the storage of the acquired production for the government. With the objective of reducing the government's paper and seeking to establish an open economy, the federal government established the system of Contract of Option of Sale, and AGF&EGF, and PEP to maintain the prices of the products.

### **Improvement of the Agriculture Financing System**

The credit systems, that were applied the flexible interest rates, influenced by the prevalent interest rates in the finance market, they are being modified for the interest rates fasten, to stabilize the activities of agricultural credit. In the case of agricultural cropping, they were applied the fixed interest rates (16% a year) starting from the agricultural year of 95/96, decreased to 9.5% the agricultural year of 98/99, and this year were reduced up to 8.75% a year. In the case of the lines of credits for the small farmers the taxes were decreased from 6.6% to 5.75%, for the agricultural harvests of 99/00 and 2000/01, respectively.

### **Incentives of the Uses of the Resources of Foreign Capital**

With to purposes of facilitating use of the external resources, it was exempted of the Tax about Financial Operation (IOF), being permitted that the total cost of the reception expresses was closer of the capacity of payments of the agricultural sector. The possibilities of use of those resources were extended to the industrial compounds of fertilizers and defensive for it reviews it of this credit to their distributors and resellers in the direct purchase of their products. The value of circulated capital of this resource is big, being in charge of 20% of the resources destined in the areas of rural credit.

### **Cedula de Produtor Rural (CPR)**

CPR was proposed by the Bank of Brazil and created by the law in the 8.929, of August 22, 1994. It is an title that allows the collateral of necessary working capital to the development of the rural activity and it is destined in the purchase promise and sale of rural products for the future delivery, being constituted in the promise of delivery of the physical product, with or without warranty constituted title. Although the main bank to operate with CPR is BB, any bank can acts at that market. The products circulated with CPR are, cotton, rice, bovine meat, carf, coffee, corn and soy. They are the products exportation.

### **Reform of Agriculture Insurance System**

Being a dependent activity of the climatic conditions, the agriculture requests the activities of insurernance of agricultural. Although, the rates applied for agricultural are extremely high, being resulted the increases of the production costs. Now EMBRAPA, is preparing the zoning maps. The government is promoting the agricultural activities following the recommendations done by EMBAPA,

through the discounts of the taxes of safe agricultural, especially to the objective farmers of PRONAF and PROCERA they were established differentiated them.

### **Reconstruction and Consolidation of the Research System and Technological Extension**

In the agricultural researches, the participation of deprived companies is being every time larger, however the government organs still assume an important paper in the development of new technologies. The government intends to modify the current system of research led by EMBRAPA, reducing the administrative sector, specifying research branches and objective products. The goal is to reach an efficient and competitive agriculture internationally, accomplishing the use of the soil in accordance characteristics of each area of the Brazilian territory. It is extremely important, therefore, to accomplish a research of agricultural aptitude of all of the areas of the territory and to prepare the possible alternatives of profitable products.

### **Expansion, diversity and modernization of harbor facilities and transportation routes**

Infrastructure is necessary to increase competitiveness of agro-production. The government plans to make new transportation routes for the regions that expected highly produce of agro-production.

### **Renewal and Consolidation of the System of Vegetable Sanitary Defense and Animal**

In the international market, the norms of vegetable and animal defense assume a paper more and more important. In the field of the vegetable and animal sanitary defense, urgent measures are necessary in the sense of promoting rigorous researches on the subject. The discussion of this theme is an international tendency, mainly when it is promoting the defense of the national products of each country. The Brazilian government is aware of this fact and it considers that this task should be assumed with efficiency and quality by the public organs, in way the one that the Brazilian products have free access to the international market.

### **Structuring of a system to facilitate and to enlarge the participation of the private sector in the branch of the commercialization**

CONAB should centralize the intervention in the support to small farmers or in emergencies. Besides, CONAB also owes if it entrusts of the improvement of the system of agricultural information on prices of the farmers and export prices, opening the public the information on the process of formation of prices and market.

#### **2.1.4 Trend in agricultural sector**

The agriculture, in spite of only representing 7.5% (2000) of the GDP, it is a sector important for the Brazilian economy; 18.77% of the Brazilian population live in the rural area, 24.2% (1999) of the population economically active is absorbed by the agricultural activities and 19.2% (2000) of the acquisition of foreign coins it is obtained through the export of agricultural products and correlates.

##### **(1) Land Use and Possession**

The land for agriculture is 353,000,000 hectares (about 41% of the total area) from the statistics in 95/96. There is no increase of agriculture area after 1980 and especially, the area for short-term farmland is substantially decreased from 41,500,000 hectares in 1985 to 34,200,000 hectares in 1995.

Evolution of the Agricultural Land (1985~1995)

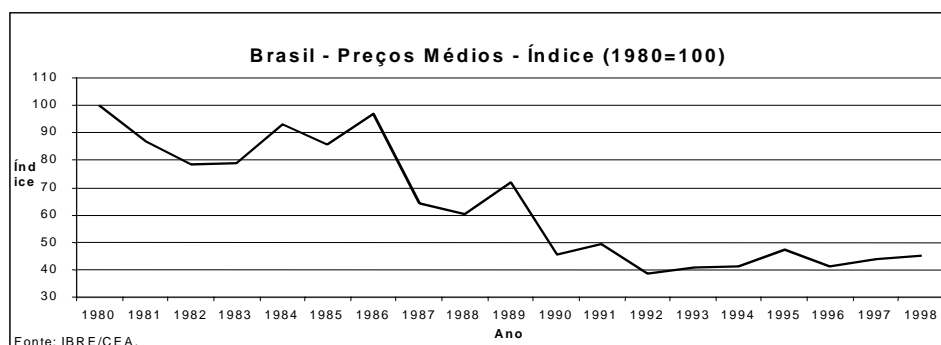
	1985	1995
Agricultural Land (ha)		
Total	374,924,918	353,498,679
Permanent Crop	9,903,472	7,528,040
Short Crop	41,569,402	34,249,382
Rsst Land	10,662,701	8,305,767
Natural Pasture	110,243,263	78,048,135
Pasture	74,094,390	99,617,053
Natural Forest	83,016,961	88,845,690
Forested	5,966,612	5,395,228
Abandoned	24,519,101	16,357,223

It forms of land condition, majorities of the farmers are the small ones, producing of less than 10 hectares, with 50% of the establishments. The areas for these small farmers are few, being only 2.3% of the total areas. The proprietors of great scales farmer's occupy 14.5% of the total areas on the other hand, being shown the tendencies of crescents.

	Num. of Farmer (%)		Areas (%)	
	1985	1995	1985	1995
Mini (< 10 ha)	51.4%	49.7%	3.1%	2.3%
Small (10~100 ha)	39.4%	39.6%	20.4%	17.7%
Medium (100~1000 ha)	8.5%	9.7%	37.0%	34.9%
Big (1000~10.000 ha)	0.7%	1.0%	27.2%	30.6%
(> 10.000 ha)	0.0%	0.0%	12.3%	14.5%
TOTAL	100.0%	100.0%	100.0%	100.0%

## (2) Rural Economy

The conditions of the agricultural economies are observed the conditions of the economical deteriorations, due to the several factors, such as of, policies of warranty of prices made negatively, the rural credit systems applied high interest rates, and of the high cropping cost and the costs of transports, especially affected the policies of economical stabilization that it controlled the prices, especially the nutritious diets. These factors punish the rural farmers, entrapping to the debt situation. It is observed the situations of the penalization in the small scales farmers. The indexes of the prices are indicated in the following figure, being indicated the falls of prices approximately of 60%. This fact affected to the rural farmers that it could not accompany the agricultural production, being meant the penalization of the small farmers.



The evolution of the prices is indicated in the following table. As well as it didn't accompany the increases prices of the agricultural products, the agricultural economies were deteriorated.

Evolution of the Prices of Main Agricultural inputs (100 =August 1994)

Agricultural Input	1995	1998/08	2000/01
Seed	107.5	141.2	159.5
Fertilizer	111.2	137.9	187.2
Agricultural Chemical	105.2	130.2	181.4
Fuel	101.8	125.0	178.8
Labor	193.9	271.9	286.7

(Source ; Agroanalysis 2000/04)

### (3) Agricultural Production

The agricultural production in Brazil was increased by the increases of the productivity, it is not of expansion of the lands. The cultivations that had increase the cultivated areas were of soybeans and cane of sugar. Although it observes some decrease of the productions, in the traditional cultures, such as of cotton, coffee, cassava, most of the cultivations shows the growing tendencies.

Planted area and Production of the Main Agricultural Products

Prod. Agricultural	Planted area (1.000 there are)			Production (1.000 t)		
	1985	1995	1999	1985	1995	1999
Cotton	3,582	1,024	672	1,673	1,452	1,416
Rice	5,446	3,906	3,810	9,023	10,541	11,779
Coffee	2,534	1,320	2,209	3,821	1,860	3,260
Cane of Sugar	3,900	4,203	4,860	246,542	303,699	333,315
Bean	5,317	3,006	4,179	2,548	2,946	2,889
Orange	662	105	1,022	70,996	99,186	113,861
Cassava	1,867	1,270	1,586	23,111	24,323	20,933
Corn	11,802	12,733	11,626	22,020	36,267	32,178
Soy	10,153	11,631	13,011	18,278	25,683	30,904
Wheat	2,670	994	1,252	4,323	1,534	2,436

(Source: IBGE)

The increments of the livestock are significant, being shown the increases of the numbers of creations. In the sector of creation of poultry it showed a significant growth, increasing 46% during 95/200.

Amount of Animals

	1995	1996	1997	1998	1999	2000
Bovine	153,433,779	150,973,934	151,560,318	153,588,139	156,986,365	157,513,274
Bubaline	866,004	852,438	865,386	*881,898	*900,450	*921,232
Swine	32,335,337	27,017,795	27,041,057	29,357,032	*30,147,684	*31,487,261
Chicken (103 ton)	4,050	4,052	4,461	4,854	5,526	*5,921
Eggs (106 dozens)	1,341	1,328	1,050	1,136	1,231	*1,286

(Source: FNP/ABCS/ABIE/IBGE) \* :Estimative

#### 2.1.5 Sociological Condition

According to the World Bank, the income per captures Brazilian for the year of 1999, it was of R\$ 3.321,00 maintaining it as an economy of medium position among the countries of high income (US\$ 2.500 to 10.000). For other as the Report of PNUD, there was for this same year a larger impoverishment of the population that can be explained by the phase of slowing down of the economy of the period 1997-1999 in certain way. In mentioned three-year period as the economy is known grew to very reduced taxes (1,01%) interfering direct and mainly on impoverished sectors of the population, integrated by extensive fractions of the middle class impoverished also.

For the optics of the conditions of life of the society, the classification according to the Index of Human Development–IDH (estimate of PNUD; 2000) it puts Brazil 74th position among the 174 countries considered for referred him calculation, maintaining the Country in the same interval, or same position (0,500 to 0,799 in IDH) of suitable medium development in the final report of 1998, in spite of having fallen four positions below the one that met in 1999.

The recent creation of the State impedes to certain point not only the most effective of the behavior of the economy, as well as the establishment of a more reliable relationship between this and the social conditions of life of the population. However data produced by the General office of Planning of the State esteemed the income per captures of the State in the years of 1999 and 2002 arrived the one of U \$928,3 and U \$1.147,8 respectively. As the same source the sector Services (52,16%), following for the Primary Sector (39,25%) with prominence for the Farming of Animal Production that alone it would represent 84% of this sector would be the one of larger contribution for the total composition of GDP of the Tocantins.

## 2.2 General situation of the State of Tocantins

### 2.2.1 Generalities

The State of Tocantins possesses 139 municipal districts, which are divided in 10 areas. The state possesses a total area of 278.420 km<sup>2</sup>, and the population in 1996 was of 1.155.913. The population of the state is concentrated in the Area of Study (north and north end), where 31,5% of the total population lives. The tax of growth of this area is very high, mainly the north end that presents a tax of 4,5%.

General situation of the State for Area

Area	No of Municipalities		Area(km <sup>2</sup> )		Population (hab)				Population Growth 96/2000 (%/ano)
					1996		2000		
North Extreme	25	18,0%	15.967,2	5,7%	159.822	15,2%	174.031	15,06%	2,15
North	13	9,4%	21.082,1	7,6%	172.476	16,4%	189.965	16,43%	2,44
Northwest	17	12,2%	19.081,0	6,9%	47.604	4,5%	102.231	8,84%	0,53
Northeast	10	7,2%	24.032,8	8,6%	100.097	9,5%	49.153	4,25%	0,80
Center West	14	10,1%	30.459,3	10,9%	87.755	8,4%	94.497	8,18%	1,87
Center	14	10,1%	23.079,4	8,3%	180.322	17,2%	242.957	21,02%	7,74
East	08	5,8%	34.113,2	12,3%	27.576	2,6%	26.630	2,30%	-0,87
South	12	8,6%	22.676,0	8,1%	113.806	10,9%	115.068	9,95%	0,28
Southwest	06	4,3%	40.496,8	14,5%	49.497	4,7%	49.548	4,29%	0,03
Southeast	20	14,4%	47.432,9	17,0%	109.687	10,5%	111.833	9,68%	0,49
TOTAL	139	100,0%	278.420,7	100,0%	1.048.642	100,0%	1.155.913	100,0%	2,47

Source: Statistical Annual of Tocantins 1997 and Population Census 2000.

### 2.2.1 Tendencies of the Economy

#### (1) General conditions of the Economy

The primary sector (agriculture, livestock) it is the most important in the state, following by the tertiary sector (trade, services), being the secondary sector (industry) almost inexistent. If it considers the annual growth, it can notice that the primary sectors and tertiary grow with the same percentage, and the secondary sector, to weigh of the low value, it possesses larger growth.

#### (2) State production for Sector

In agreement with the General office of Industry and Trade, the number of companies registered at the general office of the farm is 10.119, where 80% are retail. Besides these, the industry sector and construction that add 12% it is what call attention. Most of the companies are concentrated in Araguaína (1.341), Palmas (1.306) and Gurupí (1.235), representing 38% of the total approximately.

In the services sector they stand out the retailers and the one of agricultural input, showing like this the importance of the agriculture in the state.

#### (3) State Financial Balance

The main source of the state economy is the federal government that in 2000 reached 52% of the total approximately. To precede it comes the collection of ICMS and public debts. However, the federal government's resources have been decreasing, therefore in 1994 it was of 70% and in 2000 it lowered for 52%. On the other hand, the collection of taxes and emission of public debts has been increasing. The main collected tax is tax of circulation.

#### Gross revenue

(Unit: R\$1.00)

	1996	1997	1998	1999	2000
It writes prescriptions Ordinary	618,642,670	717,850,729	821,840,376	960,030,274	943,189,016
Taxes	159,617,635	174,265,054	206,543,803	238,497,695	277,131,300
Public taxes	16,471,619	19,872,349	21,163,333	22,400,000	2,700,000
Transfer of Properties	13,568,247	8,206,167	9,664,610	18,072,070	10,531,000
Services	7,842,380	8,511,280	2,455,519	5,159,000	4,656,000
Ordinary transfers	413,721,421	500,996,580	571,775,992	666,480,509	636,183,716
Other	7,421,368	5,999,299	10,237,119	9,421,000	11,987,000
Operation of Fund	84,628,970	90,682,854	52,211,262	198,036,031	299,126,323
Public debts	84,051,568	86,108,098	40,753,064	109,898,000	100,289,935
Transfer of Goods	377,402	677,435	3,502,326	3,570,000	3,500,000
Payment of Loans	-	1,671,699	4,843,611	4,800,000	-
Transfer of Fund	200,000	2,000,000	3,112,260	79,768,031	195,336,388
Other	-	225,622	-	-	-
<b>TOTAL</b>	<b>703,271,640</b>	<b>808,533,583</b>	<b>874,051,638</b>	<b>1,158,066,305</b>	<b>1,242,315,339</b>

(Obs.: the values of 1999 and 2000 are estimates)

(Source: PPA2000/2003 of Tocantins)

#### Annual Expenses

(Unit: R\$1.00)

	1996	1997	1998	1999	2000
Swinging	380,403,615	484,588,375	565,378,945	641,732,718	666,933,279
Remuneration	229,532,102	290,423,826	339,568,219	347,070,590	378,732,266
Interests of it Divides Interns	17,956,436	14,536,140	16,299,329	12,306,254	14,500,000
Interests of it Divides Expresses	2,170,330	4,948,451	6,989,227	12,030,251	9,000,000
Other	130,744,747	174,679,958	202,522,170	270,330,623	264,701,013
Financial swinging	419,748,951	300,381,142	296,144,306	490,476,587	549,112,060
Investment	396,133,744	267,795,022	251,427,954	458,622,693	450,901,560
Financial investment	17,276,579	16,162,910	18,318,883	16,170,900	60,010,500
Payment of it Divides Interns	6,338,628	16,423,211	26,397,469	9,930,240	15,500,000
Payment of it Divides Expresses	-	-	-	5,750,754	22,700,000
Other	-	-	-	25,850,000	26,270,000
<b>TOTAL</b>	<b>800,152,566</b>	<b>784,969,518</b>	<b>861,523,251</b>	<b>1,158,066,305</b>	<b>1,242,315,339</b>

(Note.: the values of 1999 and 2000 are estimates)

(Source: PPA2000/2003 of Tocantins)

#### (4) ICMS

Tocantins tries to promote the industrial sector, that it is not developed, reducing ICMS and supplying several incentives. Since the 1996, the primary products produced in the state are not rated with ICMS. Therefore, in the case of rice in peel and alive animals there is no taxation.

ICMS of processed cattle products is of 7% inside of the state and 12% outside of the state. In the case of the industrial sector ICMS is inside of 12% so much as outside of the state. As we can notice, the State of Tocantins reduces ICMS for agricultural products becoming a pioneer in the sector.

At federal level, in the export, influencing the situation of jobs. Like this, in December of 1996 the

federal government liberated ICMS of products for export. Therefore, in the case of the soy, if it be exported will be exempt of ICMS, but if the same soy be destined her/it an industry of national oil should be rated.

At the same time, with the federal government's revision for the following 8 basic items, the tax of 12% was reduced for 7%. These basic items are the rice, sugar, bean, soy oil, manioc flour, maize flour, coffee and salt.

## **2.2.2 State policies**

### **(1) Plan Plurianual**

The State of Tocantins presents a Plano Plurianual (2000 to 2003) that has as objective the construction of a state taking in consideration modern, economical and social, giving importance to the environment, forming industries and generating jobs with an efficient use of the natural and human resources elevating the existent potential in the state.

- To improve the Infrastructure of Transport and Energy;
- To promote Plans of Development giving Importance to the Production Agricultural, Industrial and Ecoturism;
- To modernize the Public Administration based on the Financial Balance of the State;
- To correct the Social Disparities and to Eliminate the Poverty;
- To preserve Cidadão Tocantinenses's right.

There is an attempt of accomplishing a model of sustainable development that it would activate the economy, it would correct regional differences and it would soften the poverty. The agricultural production could be increased forming, for instance, the districts Agroindustriais with the use of public and private resources. Like this, the export of the state would increase and, with the promotion of the ecoturism, the economy could be activated. Still, it would increase the job number, it would soften the poverty, it would strengthen the education, it would soften the illiteracy, it would strengthen Social welfare and it would improve the house conditions correcting the regional differences.

#### **1) Improvement of the Infrastructure of Transport and Energy**

The improvement of the transport infrastructure and energy is indispensable to the development of the state, motivating the private investment. Mainly with the implementation of the multimode transportation system, the economical activity of the state can be directed to the national Market or international. Also, it intends to reduce the costs and to elevate the efficiency of the transport through federal plans as the North-south railroad, highway Belém-Brasília, plan of navigation of the rivers Araguaia-Tocantins, besides the aerial transport. As part of that, intends to build stations that it will be part of the system multimode in Aguiarnópolis and Palmas, in the Area of Study. In the case of the electric system, it intends to promote the industry improving the conditions of electric power of the state with the improvement of the line main north-south, developing other projects for the hydroelectric potential. Besides, the improvement of the conditions of rural electrification would elevate the conditions of life of the rural area making possible new investments in this area.

#### **2) Promotion of Plans of Development giving Importance to the Production and Processing of Agricultural Products and to Ecoturism.**

The state is giving a lot of importance to the improvement of the infrastructure, although the level of use of these is still low. Also, ZEE is in the middle of the course, being possible to use their results to promote appropriate agricultural productions to the existent natural resources, activating the agricultural sector. Like this, it intends to activate the regional economy through an efficient use of the earth, forming a competitive agricultural sector, impelling the industrial sector and the ecoturism

among others. To follow the main objectives they are presented:

- Increase of the Agricultural Production
- Expansion of the Agriculture-industrial District
- Increase of the Agricultural of the State Export of Products
- Promotion of the Tourism and Ecoturism
- Promotion of the Decentralization
- Improvement of the Mechanism of Credit to the Productive Sector
- Extension and Development of Appropriate Technology
- Promotion of Sustainable Environment

### **3) Administrative modernization based on a State Financial Balance**

For the accomplishment of a public administration based on the state financial balance, the following is intended:

- To turn efficient the administrative sector, collects of imposed, costs with wages and control of the national debts and external;
- Modernization of the state administration.

### **4) Correction of the Social Differences and Amenização of the Poverty**

To correct the social differences and to soften the poverty the following it is intended:

- Reduction of the Illiteracy
- Invigoration of the Teaching
- Expansion of Establishments of Social welfare
- Increase of Jobs
- Improvement in the Conditions of House
- Promotion of the Social Attendance

### **5) It guaranteed of the Rights of Tocantinenses**

For the warranty of the rights of Tocantinenses the following is intended:

- It guaranteed of the human rights;
- Reduction of the urban violence

### **(2) Plan of Promotion of the Economy**

The plan of promotion of the economy has a lot of relationship with the improvement of the infrastructure of the transport, communication and electricity, as well as with the plan of promotion of the agricultural sector, existing several projects in process. Of the projects now in execution, they can be mentioned the project of the railroad north-south and the one of navigation of the rivers Araguaia-Tocantins at federal level and state level the project of improvement of the highways and rural electrification, and at private level the hydroelectric of having Paved, poultry industry, etc. Still, the following 6 projects are in process:

- Project of Development of the Area of the Bico de Papagaio
- Project of Development of the Area of Half Tocantins
- Project of Development of the Area of Jalapão
- Project of Development of the Area of Javaés
- Project of Development of the Area of the Canton
- Project of Development of the Central Area

### **(3) Strategy of the Environmental Policies of the State**



The State environmental policies are treated as one of the main items in PPA with the productive activity. The main strategy is the selection of cultures adapted to each earth type. The environmental policies have as base the following.

- Execution of plans to respect the environmental legislation and to reduce the environmental impact;
- To promote projects of environmental conservation and to assure their economical characteristics;
- Invigoration of the environmental monitoring;
- Project of sustainable use of environmental resources, promotion of the ecoturism;
- To promote the environmental economical zoning;
- Efficient use of the hydraulic resources;
- Use of regional environmental organs;
- Invigoration of the environmental education;
- Cooperation among the environmental organisms.

## 2.2.4 Tendencies of the Agricultural Sector

### (1) Use of the Earth, Structures Fundiária

In agreement with the data of INCRA, Tocantins possesses 43.000 farmers that it has the ownership of the earth. The unproductive proprietors' percentage is extremely high, mainly among the small farmers. Like this, only 21,1% possesses productive activity.

Number of Proprietors for Size of Property (1998)

	Mini	Small		Medium		Big		Total
		Prod	No Prod	Prod	No Prod	Prod	No Prod	
Area of Study	3,115	717	1,898	359	852	198	520	7,659
	40.7%	9.4%	24.8%	4.7%	11.1%	2.6%	6.8%	100.0%
Other	9,295	3,989	10,635	2,291	6,539	769	2,240	35,758
	26.0%	11.2%	29.7%	6.4%	18.3%	2.2%	6.3%	100.0%
State	12,410	4,706	12,533	2,650	7,391	967	2,760	43,417
	28.6%	10.8%	28.9%	6.1%	17.0%	2.2%	6.4%	100.0%

(Source: Data of INCRA obtained in SEPLAN)

1. Mini: <80 there are
2. Small: 80 to 320 there are
3. Medium: 320 to 1,200 there are
4. Big: > 1,200 there are

The characteristic of the study area is that a predominance of mini farmers in relation to other municipal districts of the state. Also the productive proprietors' percentage is very low, adding 16,7%.

Regarding area of the property, the great farmers possess 71% of the lands and the mini approximately and small proprietors only possess 20,6%. The percentage of productive properties is of 30,7%. To precede it comes the percentage of the area for property size.

Area of the Property for Size in ha (1998)

	Mini	Small		Medium		Big		Total
		Prod	No Prod	Prod	No Prod	Prod	No Prod	
Area of Study	124,097	123,613	351,458	222,845	489,880	724,525	2,625,502	4,661,919
	2.7%	2.7%	7.5%	4.8%	10.5%	15.5%	56.3%	100.0%
Other	453,190	648,274	1,804,585	1,363,655	4,016,093	2,141,484	6,578,082	17,005,362
	2.7%	3.8%	10.6%	8.0%	23.6%	12.6%	38.7%	100.0%
State	577,287	771,887	2,156,042	1,586,500	4,505,973	2,866,009	9,203,584	21,667,281
	3.4%	4.5%	12.7%	9.3%	26.5%	16.9%	54.1%	127.4%

(Source: Data of INCRA obtained in SEPLAN)

The table to proceed presents the medium area of the properties for property size, and even the mini farmers possess up to 50 there is of earth. The medium size of the properties in the study area overcomes the average of the state, because it possesses medium value loud in the great properties, mainly among the no productive.

## (2) Rural economy

It intends to know the economical conditions of the agricultural sector through the total distribution of income of the industrial sector. This distribution of incomes is presented to proceed. It is noticed that most is concentrated below 3 wages.

It is noticed that there is the prevalence of low incomes in the study area, and only 11% receive more than 3 minimum wages. As this income included of the industrial sector, it can be considered that the agricultural sector would present a value still smaller.

	s / Income	< 1 MS	1 to 3 MS	3 to 10 MS	10 to 20 MS	>20 MS	
Area of Study	4.3%	53.8%	30.9%	8.4%	1.6%	0.9%	100.0%
Other	3.2%	46.7%	35.4%	11.5%	2.1%	1.2%	100.0%
State	3.5%	48.9%	34.0%	10.5%	2.0%	1.1%	100.0%

MS: Minimum Salary

## (3) Agricultural production

The results of the harvest 99/2000 of Tocantins are presented to proceed.

Agricultural production of the State of Tocantins (1999/2000)

Product	Picked area (ha)	Production (t)	Productivity (kg/ha)
Upland Rice	99.120	164.828	1.661
Irrigated rice	49.433	215.756	4.416
Bean 1st harvest	1.969	755	383
Bean 2nd harvest	2.425	831	343
Irrigated corn	250	1.200	4.800
Sequeiro soy	44.689	114.490	2.479
Pineapple	2.222	36.870	22.091
Banana	5.429	3.062	608
Sugar Cane	3.965	150.237	42.213
Cassava	9.626	178.482	14.845

Total cultivated area has been decreasing in the state, mainly for the main grains as rice and corn. On the contrary, the soy has been presenting an increase in the cultivated area through the development of the savannah.

Cultivated Area (ha)

Culture	1985	1989	1995	2000
Rice	323,234	381,260	167,313	148,553
Corn	84,498	102,530	75,105	56,605
Bean	18,653	10,480	8,106	4,394
Soy	27,140	59,070	20,007	44,689
Cassava	12,244	10,120	11,476	9,626
Cane of Sugar	2,801	5,910	5,553	3,965
Banana	15,200	14,570	8,749	5,429

(Source: Given IBGE)

#### (4) Conditions of the Agricultural Credit

The agricultural credit of Tocantins is accomplished through BASA and BB. BASA supplies credits through FNO, and BB through the system of federal agricultural credit. To proceed it comes the credits accomplished in the harvest of 99/2000 by BASA.

Agricultural credit Accomplished by BASA 1999/2000 (thousand Real)

	(A)Bovine	(B)Pasto	(C )Installation/Machine	(D )Others	(E )Total
Value	46,225	8,454	9,709	10,14	74,602
Cattle	( A)+( B)+( C ) × 80% = 62,446		83.7%		
Agriculture	( C ) × 20%+(D) =12,155		16.3%		

It is noticed that the livestock is more favored For the credits accomplished by BB in the agricultural year of 1999/2000. However the total value financed by the federal government on this agricultural year was of R\$ 8.300.000.000, and Tocantins only received 0,4% of the financed total.

	PRONAF THE		PRONAF C		PRONAF D		Total	
	In the Contracts	Value (103 real)	In the Contracts	Value (103 real)	In the Contracts	Value (103 real)	In the Contracts	Value (103 real)
BASA	1,206	5,583	-	-	-	-	1,206	5,583
BB	-	-	243	325	1,583	4,051	1,826	4,377
(A)Total	1,206	5,583	243	325	1,583	4,051	3,032	9,960
(B)Country	89,668	352,898	262,157	279,782	336,222	963,826	688,047	1,596,507
% of the State	0.13%	0.15%	0.09%	0.10%	0.4%	0.4%	0.4%	0.62%

Most of the 40.000 existent properties in the state are related with PRONAF. Among these, the farmers that receive healthy financing of approximately 10%, that it corresponds to R\$ 9.960.000. As it should be, the financing organisms request goods to serve as mortgage or high payment capacity, showing like this the poverty of the producing of the state.

#### 2.2.5 System of Agricultural Credit

Like this, besides the federal programs, systems of financing regional, state exist, of INCRA, etc., that its turn this very complex sector. However, in the reality, the use of systems of federal credits in the state is very low. The credit system in the study area comes as it is proceeded.

##### (1) National Level

At national level, we can mention the financing systems accomplished for every agricultural year as for the cultivation cost, for investments, PRONAF, PROGER-RURAL, system related with the commercialization, etc. Now the Bank of the Earth was created, although in the reality any enterprise still is not being executed.

The national agricultural credit is composed by:

- PROAGRO
- Credit related to the marketing
- PROLEITE

##### (2) Agricultural Credit System through FNO

At regional level, as the state this included in the area of the Amazonian Legal, financings of BASA exist for companies that received incentive of SUDAM through the bottom FINAN and of FNO that is only manipulated by BASA. FNO has as main source the constitutional bottom. They exist special credits that its are returned to the small farmers and normal credits that it's also include the great farmers.

FNO has for purpose to develop and to conserve the environment of the Amazonian area, tends credit lines for the development of the rural area and of the sector of processing of agricultural products and the tourism. The program of financing of each sector is presented to proceed.

Development of the Rural Sector	<ul style="list-style-type: none"> <li>• PRONAF Group THE</li> <li>• Program of Attendance the Industrial Extrativism (PRODEX)</li> <li>• PRONAF</li> <li>• Program of Attendance to the Sustainable Environmental Conservation (PROSUMAN)</li> </ul>
Development of the Sector of Processing of Agricultural Products / Tourism	<ul style="list-style-type: none"> <li>• Program of Attendance to the Small businesses (PROMICRO)</li> <li>• Program of Industrial Development (PRODESIN)</li> <li>• Program of Attendance to the Sector of Processing of Agricultural Products (PROAGRIN)</li> <li>• Program of Development of the Tourism (PRODETUR)</li> </ul>

### (3) State Level and Special Systems

At state level, PRODIVINO that was returned to the production nuclei, existed but with the change of the content there was a desligamento with the agricultural sector. PROCERA was a special system that it financed seated of the land reform accomplished by the federal government, but as this it suffered a reorganization forming PRONAF (THE), they only remained the financing for victuals, for promotion of the production and house. Still the financing exists for PRODECER that is a project accomplished in cooperation with JICA.

## 2.2.6 Environment Decree

### (1) Outline of the state environment law

The services of environmental conservation of the state are accomplished by IBAMA, that is federal, and NATURATINS that is state. The monitoring is accomplished inside of the federal environmental laws and in the same category, of the state environmental laws. The law is composed of constitution, laws, ordinances and ordinances laws. The state environmental laws suffered a revision with base in the federal laws. The norms in the environmental law are divided in: forest, property, hydraulic resources, pollution, environmental education and acquisition of environmental permission.

As laws related to the use of the earth, the law In the 6.662 of jun/79 (environmental laws related to irrigation projects) they govern the execution of enterprises, limiting the possible area of development. The possible area of current development, in agreement with the federal law, is of 50% of the property in the savannah or even in forests. The laws related to the acquisition of the environmental permission were established in 86 through the Resolução CONAMA, forcing the accomplishment of EIA and RHYME in the execution of projects. In 94 a great revision was accomplished establishing the need of a public assembly to enter in agreement with the residents of the roundness.

As for law about environment relation article violation, penalty regulation is severely decided by the law No9605 that was established in 1998. And tree felling without permission and in the eternal preservation area become penalty regulation.

### (2) Means of environmental approval acquisition

To obtain environmental approval, it is necessary to implement environment impact investigation (EIA) before the business implementation and to make environment impact report book (RIMA). The contents of these environment investigation are approved by NATURATINS, which is an environment supervisor organization. It is necessary for every business to acquire the environment approval of 3 steps, which show below.

1. The preliminary permission (L.P.) ; It approves in the early stage step of the plan settle.
2. The business implementation permission (L.I.) ; It acquires EIA/RIMA by presenting it before the construction implementation.
3. The operation permission (L.O.) ; It acquires the EIA/RIMA by presenting it before the equipment starts.

It is necessary to obtain public permission in public hearing to the related person after obtaining business implementation permission before the business implementation. As for the environment impact investigation, it is required to describe about geography, soil, geological feature and water condition, animal and plant situation and socio-economy condition. As for agricultural development, especially with the equal to or more than 1000 ha development, the land development in the environment preservation area and the Indio protection ward vicinage, these environment investigation report books are obligated.

### **(3) The regulation of development area by the forest law**

The forest law regulates the percentage of development area. In case of this state, law No771 describes the rate. According to the federal law, the development possible percentage with development area depends on vegetation of forest and cerrado. In case of this state, the percentage set 50%.The details with development regulation area by the federal law and the state environmental law are following.

#### ➤ Development possible area by the federal law

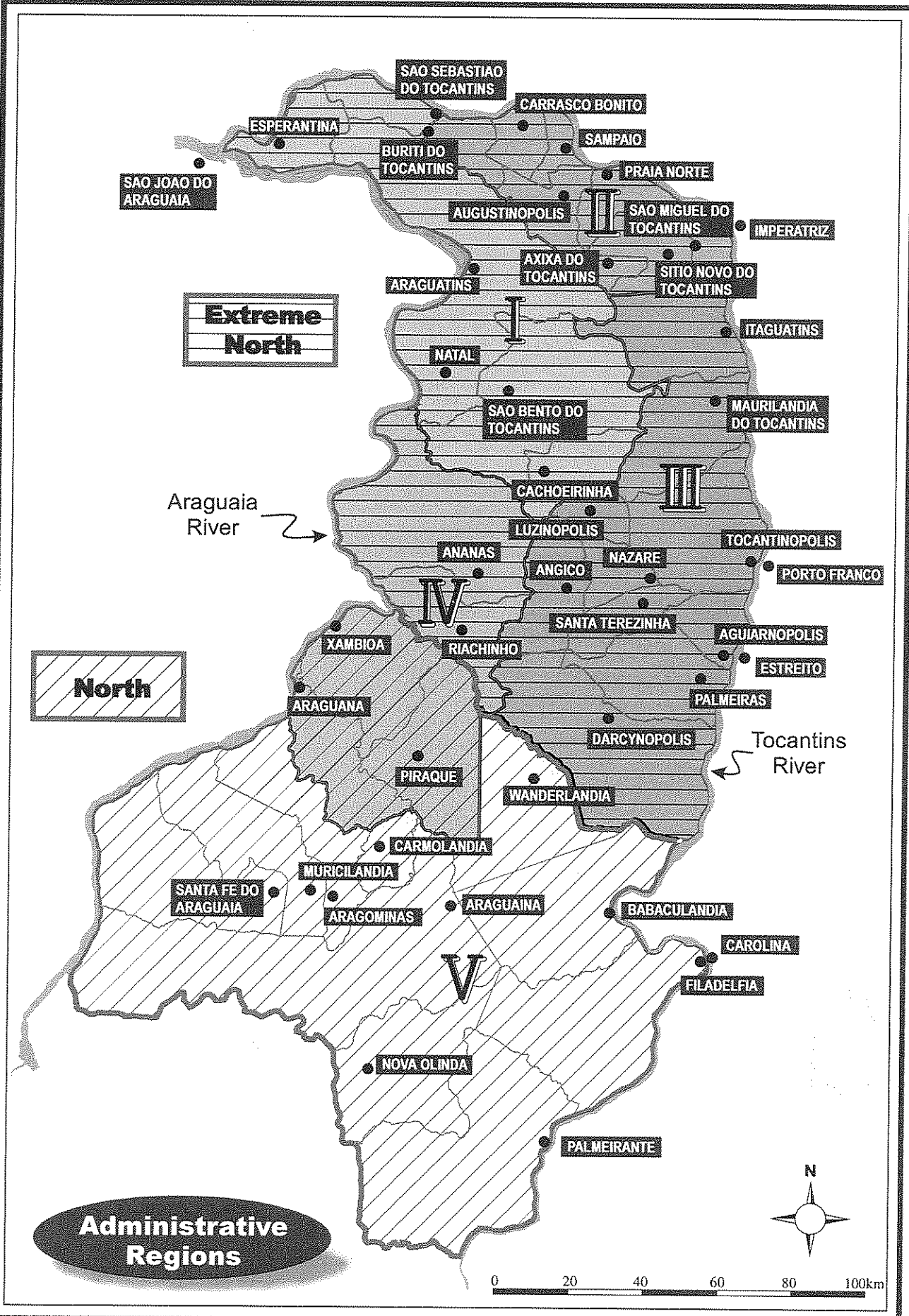
The percentage of possible development area by federal law is described regulation article in provisional announcement Medida Provisoria No 1.956-51 (the federal law) in June, 2000.The followings are the detail of the regulation article in the study area. The rate of legal prescribed preservation area needs 35% of preservation in the cerrado vegetation area and 80% in the Amazon vegetation forest area As for the cerrado vegetation area, however, 15 % of area can substitute for other possession area. When the Amazon vegetation forest area and cerrado area intermingle with identical tillage, it fixes the rate of the preservation area in the ratio of the vegetation.

In case of the small scale land possession (equal to or less than 150 hectares), introducing long term fruit cultivation mixed with local existence species can be substituted for this prescribed preservation area.

As for eternal preservation area, the change of vegetation can be admitted only for the purpose to use public.

#### ➤ Development possible area by the state environmental law

The development possible area of this states should be max. 50% of land held and the other 50% should be as a reserved as preservation area in the state law. If the preservation area could not reach a 50%, the land owner should change annually a 1/30 of his land. In case of having eternal preservation area in the possession, must do preserve the land. The eternal preservation areas are the water supply resource and the certain area of the river areas. These areas are signified according the river wide such as 30m for less than 10m width rivers, 50m for 10 to 50m width rivers, 100m for 50 to 200m width rivers, 200m for 200 to 500m width rivers and 600m for the river width exceeded 500m.



**Extreme North**

**North**

**Administrative Regions**

0 20 40 60 80 100km