



Grant agreement No. EIE/05/212/SI2.420249-  
Intelligent Energy – Europe (IEE) COOPENER

### Type 1 Actions

Acronym **CRECER CON ENERGIA**

**Title** Linking micro enterprises and income generating activities with energy services for the population in poverty conditions in South American Chaco.

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**D2 Revision of public policies related with rural energization, social and economic development and poverty reduction in the Paraguayan Chaco.**

### *Executive Summary*

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**WP2:** Establishing the role of energy in the National Strategies for the Reduction of Poverty by means of multi sector links.

**Fecha de Entrega** 14 / 12 / 2006

**Nombre y organización del responsable de este producto:**

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**Start of Project** January 1<sup>st</sup> 2006

**Duration:** 30 months

**Coordinator and organization names:**

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## D2 Review of public policies related to rural energization, social and economic development and poverty reduction in the Paraguayan Chaco.

### *Executive Summary*

#### Final Version

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## Preface

CRECER CON ENERGÍA (GROWING WITH ENERGY) is a Project financed by the COOPENER (Cooperation with Developing Countries) programme, of the Agency Intelligent Energy-Europe (IEE); it links micro enterprises and income generating activities with energy services for the population in poverty conditions in one of the poorest regions in Latin America, the Chaco region in Paraguay and Bolivia. To achieve this objective there are several barriers that must be overcome and this project addresses all of them. A horizontal communication platform will be created in order to foster the dialogue among all of the government public ministries and the organizations involved in rural electrification and poverty reduction. A toolkit will be developed to train the key staff members of the ministries involved in the evaluation of the impact of energy services in the social and economic development, and the decision makers will be helped to understand how the energy programmes can be designed to meet sector interests.

The project will help develop coordinated energy policies with the aim of contributing to the achievement of the Millennium Development Goals and Strategies for Poverty Reduction. The project will strengthen expertise in subjects such as energy for rural development, rural financing and rural micro enterprises of both national and local governments with a vast and ambitious training programme.

*List of Acronyms and Abbreviations*

AECI	Agencia Española de Cooperación Internacional (Spanish Agency of International Cooperation)
AFD	Agencia Financiera de Desarrollo (Financing Development Agency)
ANDE	Administración Nacional de Electricidad (National Administration of Electricity)
BCP	Banco Central de Paraguay (Central Bank of Paraguay)
BID	Banco Interamericano de Desarrollo (Interamerican Development Bank)
BNF	Banco Nacional de Fomento (National Fostering Bank)
BNT	Banco Nacional de los Trabajadores (National Workers Bank)
BNV	Banco Nacional de la Vivienda (National Housing Bank)
CAH	Crédito Agrícola de Habitación (Agricultural Credit of Leasing)
CONAMURI	Coordinación Nacional de Mujeres Rurales e Indígenas (National Coordination of Rural and Indigenous Women)
CONAVI	Comisión Nacional de la Vivienda (National Housing Committee)
CONACYT	Consejo Nacional de Ciencia y Tecnología (National Council of Science and Technology)
DGEEC	Dirección General de Estadística, Encuestas y Censos (General Office of Statistics, Surveys and Census)
DRE	Dirección de Recursos Energéticos (Direction of Energy Resources)
ESSAP	Empresa de Servicios Sanitarios del Paraguay SA (Company of Sanitation Services of Paraguay SA)
ENPAB	Estrategia Nacional y Plan de Acción para la conservación de la Biodiversidad (National Strategy and Action Plan for the conservation of Biodiversity)
FDC	Fondo de Desarrollo Campesino (Farmer Development Fund)
FDI	Fondo de Desarrollo Industrial (Industrial Development Fund)
FIDA	Fondo Internacional para el Desarrollo Agropecuario (International Fund for Agricultural Development)
FMI	Fondo Monetario Internacional (International Monetary Fund)
FNC	Federación Nacional Campesina (Farmer National Federation)
FOMIN	Fondo Multilateral de Inversiones del BID (Multilateral Fund of IDB Investments)
FONACYT	Fondo Nacional de Ciencia y Tecnología (National Fund of Science and Technology)
GEF	<i>Global Environment Facility</i>
GTZ	<i>Gesellschaft für Technische Zusammenarbeit</i>
IFIs	Instituciones Financieras Intermediarias (Intermediate Financing Institutions)
INCOOP	Instituto Nacional de Cooperativismo (National Institute of Cooperativism)
INDERT	Instituto Nacional de Desarrollo Rural y de la Tierra (National Institute of Rural and Land Development)
INDI	Instituto Paraguayo del Indígena (Paraguayan Institute of the Indigenous)
INTN	Instituto Nacional de Tecnología y Normalización y Metrología (National Institute of Technology, Normalization and Metrology)

IIRSA	Iniciativa para la Infraestructura Regional de América del Sur (Initiative for the Local Infrastructure of South America)
KfW	<i>Kreditanstalt für Wiederaufbau</i>
MCNOC	Mesa Coordinadora Nacional de Organizaciones Campesinas (National Coordinating Table of the Farmers' Organizations)
MIC	Ministerio de Industria y Comercio (Ministry of Industry and Commerce)
MEC	Ministerio de Educación y Cultura (Ministry of Education and Culture)
MOPC	Ministerio de Obras Públicas y Comunicaciones (Ministry of Public Works and Communication)
MSPBS	Ministerio de Salud Pública y Bienestar Social (Ministry of Public Health and Social Welfare)
ONAC	Organización Nacional Campesina (National Farmer Organization)
OIT	Organización Internacional para el Trabajo (International Labor Organization)
ONG	Organización No Gubernamental (Non Government Organization)
OLADE	Organización Latinoamericana de Energía (Latin American Organization of Energy)
PEA	Población Económicamente Activa (Economically Active Population)
PESE	Plan Estratégico del Sector Energético de la Republica del Paraguay (Strategic Plan of the Energy Sector of the Republic of Paraguay)
PCHs	Pequeñas centrales hidroeléctricas (Small Hydroelectric Centrals)
PIB	Producto Interno Bruto (Gross Internal Product)
PNUD	Programa de Naciones Unidas para el Desarrollo (United Nations Programme for Development)
PRODEEM	<i>Programa de Desenvolvimento Energético de Estados e Municípios</i> , Brasil (Programme of Energy Development of States and Municipalities)
SAS	Secretaria de Acción Social (Social Action Secretary)
SEAM	Secretaría del Ambiente (Environment Secretary)
SENASA	Servicio Nacional de Saneamiento Ambiental (National Service of Environment Cleansing)
SIAF	Sistema de Administración Financiera (System of Financing Administration)
SIN	Sistema Interconectado Nacional (National Interconnected System)
STP	Secretaria Técnica de Planificación (Technical Secretary of Planning)
VMME	Vice Ministerio de Minas y Energia (Vice Ministry of Mines and Energy)

## 1. Introduction

The Paraguayan Chaco is part of the Great South American Chaco and takes up most of the national territory<sup>1</sup>. The region is characterized by a scarce population – mostly indigenous nationalities that generally live in disperse communities in the rural and suburban areas –, and by an rather unexpressive economic activity that is highly concentrated in the central area of the western region of the country (a territory located on the right margin of the Paraguay River). In most part of the Chaco region, the troubles, which are the same as in the rest of the country, related to education, employment, health, access to the land, lack of physical infrastructure and food safety, are even more serious than in the rest of the country.

One of the main problems in the Paraguayan Chaco is the unequal distribution of the land, in spite of the land reform that has been under implementation for over seven decades at a national level. This problem is not restricted to the Chaco region but to the whole country, and in a general way has worsened up until the early 90's: in 1956 the large estates (more than 1,000 ha) took up 36% of the territory; in 1991, that surface had increased to 44%. This situation was brought about not only by the system of privileges of the Stroessner regime<sup>2</sup> but also by delays in the deed executions of the land and the illegal trade of property rights granted by means of the land reform. The indigenous population is one of the most seriously harmed in relation with the ownership of the land, which is the result of a historical plundering of their ancestral lands; this has in some cases left entire communities practically “trapped” inside large estates.

The presence of indigenous nationalities and communities is an important feature that differentiates the Chaco region from the rest of the country. There are characteristics to these populations that if not taken into account might complicate census jobs, programmes and projects. These are, for example: a) the high mobility of the indigenous, not only because they are mostly nomads, but also due to the fact that some families move to the ranches in the months when there is labour demand; b) the structure of the indigenous families is more complex than the western model of the nuclear family (in most cases they form extensive families), and c) the social structure and the cultural values of these nationalities relate to those of a traditional civilization, very different from the modern western one.

The area known as central Chaco is one of the few singular areas in the Chaco region, since several Mennonite communities are settled there, and they have a high level of development that is based on agricultural and dairy industries, with a particular model of cooperativism. These colonies have services of assistance to the population least favoured in the region.

Another pressing problem in this region is the lack of water. It is difficult to find (or maintain) superficial water and there are salinity problems in a large part of the underground water reservoir of little depth. Apart from the use of deep holes, perforated in only a few places, wells are being used as alternatives, and water is collected directly from rivers, streams and lakes, or else in what they call “tajamares” (dams). Nevertheless, the specialists warn that the quality of the water that comes from these sources is generally not apt for human consumption, without previous treatment.

Many of the communities in the Chaco region do not have access to electric energy. All of the Chaco departments have the lowest rates of coverage of electricity service, far below the national average<sup>3</sup>. It is worth mentioning that the efforts of the national government, in general related to

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<sup>1</sup> Departamentos of Boquerón, Alto Paraguay and Presidente Hayes, on the right margin of the Paraguay River, and part of some departments on the Eastern region, where the most important one – as far as surface involved – is the Department of Ne'embucú

<sup>2</sup> Regime of President Alfredo Stroessner, who ruled Paraguay between 1954 and 1989, a period in the political history of Paraguay marked by a single-handed authoritarian regime with power based on the trilogy government, armed forces and red party (the party that has been in office since the mid 20<sup>th</sup> century until the present)

<sup>3</sup> According to data from the National Institute of Statistics, Surveys and Census the rural area coverage rate in the Chaco Departments varies between 28% and 62%, versus the national average of 72%.

infrastructure development (taking into account mainly road building, electric energy and school construction), have been very scarce in this area. This handling has been different from the one a large part of the oriental region received in the past.<sup>4</sup>

## 2. Description of the policies, the institutional frame and the actors

### 2.1 *Towards a cooperation and coordination of social policies*

The policies in the social area, in spite of the existence of an entity devoted exclusively to centralized planning, have been disperse and distributed in several administrative sections and public entities in the past. Each one of the organisms involved answered to policies of their own, that many times were neither explicit nor clear.

At present, the central government has shown a willingness to overcome the institutional dispersal in relation with these policies. Thus, in 2003 the Social Cabinet was created, by means of Decree 401/2003; it is a high level collegiate presided by the President of the Republic. This Cabinet is made up by the heads of the following State ministries or secretaries: Social Action Secretary, Ministry of Culture and Education, Ministry of Public Health and Social Welfare, Ministry of Economy and Ministry of Agriculture and Stockbreeding. Also the vice-president, the Secretary General Minister and the Presidential Chief of Staff are involved.

The Social Cabinet has the main functions of watching that the social programmes are connected to the fight against poverty and that the organizations act in a cooperative and convergent way. It defines the agenda of social strategy and fight against poverty, and orients the international cooperation in its jurisdiction.

This effort directed towards the cooperation and coordination among the different organisms of the central government must be highlighted. The creation of a high level instance such as this one is innovative. The results can not yet be evaluated, due to its recent creation, but the information that we handle is that they are working on a social public policy.

### 2.2 *The land reform and the rural and indigenous development*

There are several critical social areas that are related to rural development (land, education, health, water, indigenous, etc). However, there are two issues that are often overlooked, and although not necessarily a priority (because they all are), they are perhaps basic for the rural development in the Paraguayan Chaco: the land reform and the indigenous peoples and nationalities.

Regarding the distribution of the land, the country presents alarming figures. According to a recent report (FIDA, 2004), 65% of the rural producers own only 5% of the lands, while only 1% of the land owners (the large owners) have 67% of the lands. This confirms that one of the central problems in the rural development throughout the country is related to the distribution (and use) of the land.

In the context of the land reform, in 2002, the Legislative Power passed the Agrarian Statute of the Republic of Paraguay (Law 1863/02 and modifications introduced by Law 2002/02), and two years later there were advances in the process of institutional modification in this sector with the transformation of the Institute of Rural Welfare into the National Institute of Rural and Land Development (INDERT), by means of Law 2419/04. The objective group of the policies of INDERT

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<sup>4</sup> One of the main action axis of the governmental policy, between the 60's and the 80's, was the development of the infrastructure in the central band of the Eastern region of Paraguay.



- as established in its mandate determined by the legislation<sup>5</sup> - centers around the farmer population in poverty conditions, that lives in colonies or settlements, and those considered deprived of land. The INDERT policies are based on:

The promotion of equal opportunities; social equity and justice in the distribution, holding and deed execution of the land, and in the start of the process of self management development

The supply of a productive piece of land, in the extension of incentive for the growth of food, and in the creation of areas of agro-industrialized profit, and technical and organizational training

The promotion of the use of techniques of participative strategic planning, for all the colonies, as a management instrument, with productive refundable and non refundable credits aiming at generating conditions for consolidation at the level of organization, production, commerce and self managed conduction.

The INDERT has, according to the 2006 Budget Law, an important budget (in the order of 17 million Euros, with 81% destined to capital expenses) to carry out its policies. Although there are INDERT activities in the Paraguayan Chaco, these do not constitute long range operations, with the exception of some actions that are being carried out in Puerto Casado, a municipality in which recently one of the most controversial expropriations in the last few years has taken place.

However, the administration has expressed a marked interest in getting ahead with actions in the Chaco communities. One positive aspect is the very positive willingness to work in coordination with other public organizations, such as ANDE, and with civil organizations.

On their part, the indigenous, after several decades (in fact, hundreds of years) of being practically ignored, have some kind of acknowledgment in the group of public policies, although with many difficulties for their execution.

According to what is stated in Article 1 of the Indigenous Statute (Law 904/81 partially modified in 1996 and 2003), what is sought after with the Law is *“the social and cultural preservation of the indigenous communities, the defense of their patrimony and their traditions, the improvement of their economic conditions, their effective participation in the process of national development and their access to a legal regime that guarantees land property for them and other productive resources in equality of rights with the rest of the citizens”*.

By means of this legal diploma, they recognize, among other rights: the self determination of the indigenous peoples, the access to the land and the respect to the traditional forms of organization. The Paraguayan Institute of the Indigenous (INDI) was created as an authority for the application of the Statute of the Indigenous; it is a purely public entity.

At first instance, it might be said that the legislation in force in Paraguay presents a legal frame that is favourable to the indigenous peoples. However, only the legislation is not enough to guarantee the protection of their rights and the execution of the policies. It should be accompanied by concrete state policies and actions. In fact, according to what is stated in the National Strategy and Action Plan for the Conservation of Biodiversity (ENPAB) of Paraguay, the indigenous population receives a contradictory treatment, since although the State recognizes most of their rights, part of this population is not able to exert those rights. (Republic of Paraguay, Environment Secretary; 2003:8). Besides, in the Paraguayan Chaco, according to a report of the International Labour Organization, the treatment of indigenous as rural labour in some regions with the exception of the Mennonite colonies (where there are exemplary social programmes) constitutes a violation of the labour legislation and is at the borderline of ethical standards.

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<sup>5</sup> Law 1863/02 was modified by Law 2002/02. This Agrarian Statute establishes as a main objective of the sector: *“(…) adaptation of the agricultural structure, leading to the establishment, strengthening and harmonious incorporation of farmer family agriculture into the National Development, in order to contribute to overcome rural poverty and its consequences, through a general strategy that integrates productivity, environmental sustainability, participation and distributive equality.”*

### 2.3 Policies of physical infrastructure

#### 2.3.1 The problem of the water in the western region

One of the most important actors as far as water supply is concerned, is the Company of Sanitation Services of Paraguay S.A. (ESSAP), a public company that is the only one with permission by law to provide potable water distribution service and sanitary sewage in locations with more than 10,000 inhabitants. In places with less population the state organism responsible for the distribution of potable water is the National Service of Environmental Cleansing (SENASA), which is subordinated to the Ministry of Public Health and Social Welfare (MSPBS). This Service carries out investments with public funds, and transfers the administration of the systems of water to the users' organizations called Sanitation Assemblies. Pulfer (2005) highlights, however, that *"Due to the great needs that exist on this subject SENASA is not capable to meet them all. That is why other entities are also intervening in the construction of potable water systems in rural areas, such as the departmental Governments, The Ministry of Agriculture and Stockbreeding (MAG), The First Lady Foundation, PNUD, UNICEF and international NGO's, among them International Plan. In these cases the investments are generally nonrefundable for the beneficiaries."*

As far as the western region is concerned, the water situation is rather critical. The national average of rural family units served with channel water is 22%; in the Chaco departments the figures vary between 3% and 20%. This problem constitutes one of the "bottlenecks" for the development of central Chaco. This is why in the 90's studies were initiated to find a solution to this problem, apart from some institutional decisions. Among these, an Aqueduct Commission was formed, which had a good head start. However, in the latest years, due to the lack of action and definition of this central government initiative, the departmental governments – the governments of Boquerón, Alto Paraguay and Presidente Hayes – created the Water for Chaco Corporation (CACH) in 2004. The departmental governments state with emphasis that the lack of progress in carrying out the mandate of Aqueduct for Chaco created in 1999 by a presidential decree (Nr 4639/99) was the fact that brought about the creation of that corporation. According to the same governments, the commission *"...did not step assertively towards a solution for fighting the lack of water in Chaco..."*

An outstanding factor in this initiative of the intermediate governments in relation to the water is that although it was these governments that took the initiative for the creation of the Water for Chaco Corporation, it relies on the participation of non government organizations, end users, indigenous organizations and local entrepreneurs and it is operating on the budget of the departmental government of Boquerón. According to the latest information gathered, the corporation is about to launch a bidding process for the concession of this public work to a private company. In fact it is quite a particular and original public-private association for a public service work.

#### 2.3.2 Rural energizing

Within the current institutional frame<sup>6</sup>, the Direction of Energy Resources (DRE) of the Vice Ministry of Mines and Energy (VMME) of the Ministry of Public Works and Communications (MOPC) and the National Electricity Administration (ANDE) have explicitly expressed power capacity to carry out projects of electric development in the rural area. It is important to point up that DRE-VMME are authorized to formulate policies and carry out studies and projects of a demonstrative kind, but the ANDE has the exclusiveness to supply public electricity by Law 966/64; this permission can be delegated *ad referendum* of the National Congress (there is only one case of delegation throughout the country).

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<sup>6</sup> See Law 966/ 64 of the ANDE Organic Charter

Based on an interview with high officers of the VMME regarding energizing Chaco and poverty eradication, it is pointed out that the government is seeking the accomplishment of the following objectives:

- Studying and planning a larger diversification with sources of autochthonous energy. In this sense, other sources of energy will be taken into account, such as hydro carbonates (the exploration of natural gas in the Paraguayan Chaco) and the sources of alternative energy.
- Fostering a stronger commitment of all the organisms related to the energy sector for the benefit of society as a whole, especially the most needy, by means of the introduction of foreign currency in the exportation of electricity.
- Cutting down on the environmental impact of the use of energy, also promoting the sustainability of the Paraguayan energy system.

Apart from this, the Vice Ministry of Mines and Energy has recently finished drawing the *Strategic Plan of the Energy Sector of the Republic of Paraguay* (PESE). Overall, according to the PESE document (Republic of Paraguay, MPOC and STP, 2005), the objectives of Paraguay's energy policy should be the following: a) Institutional coordination; b) Supply safety; c) energy efficiency and conservation; d) Extension of energy coverage; e) Development of a regulatory frame; and f) Integration into the MERCOSUR. The PESE does not put forward an explicit and specific proposal in connection with rural electrification; however, this proposal might be interpreted as part of objectives (d). On the other hand the introduction of renewable energy is related as a performance line within objectives (d) and (b). As far as the introduction of renewable energy is concerned, the PESE proposes mainly the drawing of a Development of Renewable Energy Plan and the fostering of pilot applications of renewable energies for electricity production.

Apart from the goal of a matrix of diversified energy supply, the PESE highlights that one of the fundamental reasons for the VMME to carry on with this Plan, that implicitly refer to the rural areas is: *"To seek acceptable energy solutions by means of renewable energy for geographical areas with severe difficulties of energy supply by conventional or classic means"*. A fundamental flaw of the PESE is that at no point does it direct in the necessary financing to carry out what is proposed.

The ANDE has been undergoing a Programme for the Recovery of Works of the Self Help Distribution System (PRODSA), which consists of the repair of the distribution grids of low and medium tension that are in poor conditions. This programme is a follow-up to the self management plan, called "Self Help Plan". This plan was useful as a support to the massive rural electrification programme developed mainly in the 90's. In this scheme, the ANDE financed the infrastructure, and the beneficiary communities provided basically the labour and the materials of minor technological tenor, such as the posts of electric wiring. This plan underwent budget troubles due to structural problems, both coming from the electric sector and the national economy, and this is why the pace of the plan slowed down, leaving the coverage indicator in the order of 90% to 93%. An important reason for this slowdown is the fact that the villages that do not have electricity service are farther and farther away from the ANDE's distribution grids, which implies – at first – that the costs are increasing. The PRODSA programme – mentioned above – has a 10 year horizon and is being carried out according to technical priorities, taking into account the conservation conditions of the grids done by the self help system<sup>7</sup>.

In the scope of rural energization, the National Institute of Technology, Normalization and Metrology (INTN), by virtue of its participation in the National Quality System and in the Science and Technology National System, is carrying out pilot projects with renewable energy. The INTN

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<sup>7</sup>. In connection with renewable energy the ANDE stated in an interview that although they do not carry out projects of electric generation with alternative sources there is institutional interest to support such initiatives.

has coordinated the AE-071/01 Multilateral Project Argentina, Paraguay, Uruguay of the Organization of American States (OAS) “Energization of Rural Community Centres” implemented in two communities (Punta Diamante, in the department of Ñeembucú, and *Yacac Vash* –an ethnic group, in the Department of Boquerón<sup>8</sup>. At present the INTN is coordinating the AE204/03 Multilateral Project Argentina, Paraguay, Perú and Uruguay “Energization of Isolated Rural Communities with Productive Goals” implemented in three Paraguayan communities (Punta Diamante and Piretukue, in the Department of Ñeembucú; and *Yacac Vash* in the department of Boquerón): The INTN is an autarchic and decentralized entity and it relates to the Executive Power through the Ministry of Industry and Commerce.

### 2.3.3 The road infrastructure in the rural area

According to the Direction of Road Development of the MOPC, the definition of road development policies, and the planning of investments and project management are in charge of the same ministry. By means of a number of departments, the MOPC executes, administers and controls around 80% of the investments in the road sector.

The main policy in connection with the development in the road area in the Paraguayan Chaco is the Programme for Road Integration in the West carried out by the MOPC<sup>9</sup>. The programme involves a set of works and actions aimed at improving and consolidating the most important road axis in the Western Region of Paraguay, in order to ensure a flow of permanent traffic; to facilitate the transport of cargo and passengers; to support the development of the productive sectors in that region, thus expanding the possibilities of commercialization of their products in the local and international markets.

### 2.4 Micro-entrepreneurship and support to the productive sector

Small and medium sized enterprises constitute a highly important area for the generation of income and employment in the Paraguayan population. However, limited access to credit is one of the most important restrictions for the development of these economic units. In the last ten years a varied offer of micro credits has been developed though the introduction of credit technologies and financial products adequate to the characteristics of the Paraguayan small and medium enterprise. In this category around 78% of the Economically Active Population of the country is included. The problems identified with this sector of the economy are varied: an *“important proportion of the jobs in Paraguay are of poor quality, characterized by low compensation and the lack of access to a social protection that should enable the workers to face disease contingencies, accidents or old age.”* (Micro Service Consult, 2005:10).

According to Micro Service Consult (2005), the Paraguayan micro enterprises share the same characteristics:

- ☐ They are generally family-owned, and the owners work actively.
- ☐ In many cases they belong to the informal sector which means that they work outside of the law in force in what respects to this sector.
- ☐ They use methods of intensive production in labor.
- ☐ They use empirical knowledge (not always based on modern science) and do not have access to modern tools of business administration.

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<sup>8</sup> This project is the object of an academic study, carried out within the frame of a master project of the Technological University of Delft, the Netherlands, in cooperation with ESENERG and INTN. The study is about a socio-economic and institutional analysis of the formulation and execution of the project. The object of the study is to contribute to the knowledge of how such projects help towards the socio- economic development of rural communities.

<sup>9</sup> It is being financed by the Interamerican Development Bank (IDB), the Andean Fostering Corporation (CAF), the Fund for the Development of the River Plate Basin (FONPLATA), and funds of the National Treasury.

- They are faced to a regulatory frame that has a large number of laws, decrees and resolutions; therefore they reach a disproportionate level of administrative expenses to meet the norm. These expenses are estimated at USD 57 for individual companies and USD 300 for societies of limited liability.
- They have hardly any access to adequate sources of foreign financing from the financial sector; they are financed by family or personal loans of inadequate conditions.

One of the most active partners as far as small and medium sized enterprises is concerned is the Ministry of Industry and Commerce, which at the moment is implementing the most meaningful project for the area: the Programme of Enterprise Development for Small and Medium Companies, also known as the PR-100. The specific objectives of this project are the easy access of companies to the service of enterprise development, the simplification of tool services for private dealers in order to improve the quality of their offer, and the key aspects of the ambiance of the sector through the Competitiveness Forums. In order to improve the financial services for the sector of small and medium sized enterprises, there are initiatives from the Interamerican Development Bank, the Multilateral Investments Fund (FOMIN) and the Spanish Agency of International Cooperation (AECI).

Financing the rural productive sector involves public banks, such as the National Fostering Bank (BNF), the Stock Breeding Fund and the Agricultural Credit of Leasing (CAH). According to the FIDA (2004) report, the public bank management in Paraguay does not enjoy the reputation of a transparent administration of funds. Besides, there have been issues of subsidized rates, lack of follow-up to the execution of loans and delays in credit to the cotton plantation. The FIDA report specifies the establishment of the “late payment” (*default*) culture, as one of the main reasons for the lack of efficiency in the financing system for rural development. The pressures on the public banks are excessive and the government generally gives in to the pressures to pardon the debts. Besides, the financing system is characterized – according to FIDA (2004) – by oligopoly-like positions and by granting loans with high interest rates, which amount to as much as twice the annual inflation rates. On the other hand, the private financing system does not grant loans for farmers and the role of the best organized cooperatives remains marginal in relation with the rest of the financing system for this sector of the population.

In the last few years some entities have been created in the second degree financial institution modality; they are: the Fund of Farmer Development (FDC), in 1991; and the Financing Agency of Development (AFD), in 2005.

The AFD, which has incorporated the FDC within its structure, is the public financing entity authorized to transfer funds to public and private Intermediate Financial Institutions (IFIs), as well as to cooperatives supervised and regulated by the National Institute of Cooperativism of Paraguay (INCOOP)<sup>10</sup> that will compete for the funds in a public bidding process.

According to Art. 5 of Law 2640, the AFD funds transferred to the IFIs will only be used for:

- Rural development projects
- Credit for Micro, Small and Medium sized Companies (MPYMES).
- Creation and enterprise development, with an emphasis on small and medium companies.
- Exportation of goods and services, and importation of capital goods at mid and long term, especially for small and medium sized companies.
- Projects for Tourism development.

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<sup>10</sup> According to Paraguayan legislation, banks and financing institutions are under the supervision and regulation of the Superintendency of Banks of the Central Bank of Paraguay, while the cooperatives are supervised and regulated by the National Institute of Cooperativism (INCOOP), an entity decentralized from the public administration, whose resources come from the cooperatives themselves and from the State.

- Projects of investment in basic infrastructure, carried out by the private sector, or granted to it for its execution.
- Development of housing programmes, urban programmes and other actions aimed at cutting down the housing deficit.

The financial resources come from State contributions, donations and international loans with State backup.

### *2.5 International cooperation*

The Republic of Paraguay receives approximately the equivalent of 160 to 200 million Euros of non refundable cooperation per year. This high amount, as compared to the size of the country, is connected to the fact that Paraguay is among the eligible countries in many programmes of international cooperation, due to its scarce socio economic development in comparison to the other countries in the region.

As far as non refundable cooperation is concerned, bilateral cooperation to Paraguay is around 56% and the cooperation of multilateral and regional organisms reaches 43%. Among multilateral and regional organisms the most important contribution comes from the European Union.<sup>11</sup> The Interamerican Development Bank and the agencies of the United Nations System are runners up. The areas that receive the highest part of this non refundable international cooperation are: agricultural development, rural and social development, fighting poverty, strengthening of the civil society, health, education, State modernization and environment. It is worth pointing out that a high percentage of the programmes and projects are being carried out in Paraguay with a financial balancing entry and international assistance.

### *3. Analysis of State policies, international cooperation and institutional frame, with an emphasis on the modalities of intervention and interaction of the main actors*

In relation to poverty reduction, a remarkable progress has been noticed in reference to health coverage and education in the country. The objectives of decreasing social inequalities and poverty reduction are recurrently present in the official speech. The Social Action Secretary, the official organism responsible for the policy to fight poverty, has been developing a programme aimed at fostering productive activities in some of the poorest regions of the country (PRODECO). It has also developed other projects and programmes of social promotion with the financing of the Interamerican Development Bank. Nevertheless, it has been noticed that there is no connection between the SAS and the organisms most linked to the energy policies of the country or to the organizations that have been developing some actions in the field of rural energization (like the INTN, for example).

The INDERT, which is the main organism in the area of agricultural development and of land distribution and thus one of the important actors as far as poverty reduction, has contacts with the ANDE for the electrification of some villages. Nevertheless, these contacts are not being developed on the basis of decentralized systems with new sources of renewable energy.

The ANDE in fact is not carrying out by itself any projects of electric generation with new sources of renewable energy, although it has manifested institutional interest to support initiatives from other organizations. The link of the ANDE to the INDERT is an example of the interactions of the ANDE with other public organisms. Besides, these interactions that the ANDE is carrying out within the frame of the Self Help programme of rural electrification (now being carried out by the above mentioned PRODSA) have only taken place in the implementation phase of this programme. In fact, the design and implementation have been carried out almost exclusively by the ANDE. In this programme there was no intervention – at the level of the central government – either of the Viceministry of Mines and Energy, as an organism of energy policy, or of the ministries responsible

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<sup>11</sup> The cooperation of the European Union with the Republic of Paraguay is implemented in the context of the Acuerdo Marco de Cooperación (Agreement Frame of Cooperation) between the European Economic Community and the Republic of Paraguay. This Agreement was ratified by Law Nr. 14/92.

for rural development, such as the SAS and STP. However, it ought to be clarified that the ANDE carries out this programme based on its Charter.

As a matter of fact, the rural electrification programme that the ANDE is carrying out is based almost exclusively on grid expansion and there is no clear orientation as to the development of decentralized systems, which are generally more favourable to the development of new sources of energy. In other words, there isn't a clear formal policy in relation to the new sources of renewable energy (wind, solar, biomass, and small hydroelectric centrals – PCH) for electricity production, though it must be remembered that Paraguay is a big producer of hydro energy. There is no direct link between the development of these new renewable sources of energy to the rural electrification programme, as can be observed in some Latin American countries<sup>12</sup>.

As far as other instances of infrastructure that are essential to rural development – and consequently to poverty reduction – it is highlighted that there is a process toward decentralization mainly due to the demand from local governments. According to the Direction of Road Development of the MOPC, the department governments are having increased participation in road issues. With respect to the water issue, it is highlighted that currently there is no cooperative relationship between the central government and the governments of the Paraguayan Chaco, which can be inferred from the fact that the department governments themselves have declared recently that the central government has not produced any concrete results in the last 10 years of the Chaco Aqueduct project, led by the central government. Thus the governments created the Corporation Water for Chaco.

The Financial Agency for Development has been recently created with the object of directing funds by means of intermediate financial structures with which funds could be transferred to associations or natural persons. The problem as far as micro-financing and the role of the AFD has two aspects: first, the AFD is not totally operative (it is undergoing the process of creation of professional staff and fund raising); second, and most important, is the lack of real guarantee mainly in the case of natural persons or family units for the legal tenure of the land in the rural area. Many farmers do not own their properties legally, therefore cannot have access to loans officially, and even less so commercially.

Based on the analysis of policies in relation to rural development, micro-entrepreneurship and energization, what stands out is the scarce or null coordination among the organisms for the development of programmes and projects. It is inferred that one of the most important causes for the lack of cooperation among the different actors, above all state actors, is the fragmentation and complex distribution of functions among the varied organisms in the public sector. We say fragmentation because in most cases (for example, ANDE, INTN, MOPC, SAS) the functions are specific and many times restricted; and we mention complex because in some cases there is an overlap of functions among some organisms. That is, there are zones that are hard to distinguish among these organisms, as is the case of the functions of the MOPC and of the SEAM, as far as renewable energy in the frame of climate change. In other cases, the overlap can be seen among different government levels; for example, the case of electric energy as an attribution of the ANDE – a state company that can legally operate in all of the national territory and in the whole chain of value of electricity – and, to a certain extent, the departmental governments that have legal powers for the provision of energy, although there aren't very clear definitions in that respect.

As a matter of fact, these fragmentation characteristics and the complexity in the distribution of power of organisms would not generate any problems if there were a level of coordination among the different organisms pursuing common or complementary objectives in the frame of national, local programmes or projects. Or else, if there were a series of relationships – preferably formalized ones – that established the jurisdictional limitations of the scope of the action of organisms that are very close to one another in their functions. However, it is understood that cooperation among the different actors described can precede the coordination or the development of policies, programmes and projects. And, at the same time, a convergent vision can be the basis of the cooperation. In the light of this last commentary, some recommendations will be indicated in the following section.

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See for instance the PRODEEM programme (Programme of Energy Development of States and Municipalities) and the current Light for Everyone Programme, both from Brazil.

#### *4. Final reflections and recommendations*

One of the main problems detected in this policy revision refers to the difficulty to implement the process of government decentralization. Possibly, the government level that has been most seriously damaged in this process – and in fact the newest one at a constitutional level - is the level of intermediate governments (those of the Departments). One of the central causes for this issue is the very exercise of the government which has been historically highly centralized; this allowed for the creation of several interest groups (whether integrated by organisms of the central government, or state or private companies) that now feel threatened by the decentralization process. As will be developed later, this aspect is considered crucial to be taken into account by the actors involved in the project.

Another conclusion is that the institutional frame in Paraguay, in particular, the energy sector, is characterized by the difficulty to define and implement public policies with a basis on a convergent joint vision of the actors that should be involved. As a consequence, the planning of the sector and the definition and implementation of sector policies have been historically damaged. There is an important weakness – that is even identified by several studies and reports about the institutional aspect produced for the Vice Ministry of Mines and Energy's internal affairs – that refers to the fact of not having an instance of convergence, cooperation and coordination of the different sub sectors that make up the energy sector (electric energy, hydrocarbon, new sources of renewable energy etc).

The Plan Estratégico del Sector Energía (PESE) (Strategic Plan of the Energy Sector), for example, suggests the creation of a Ministry or Secretary of Energy together with an organism of inter ministry coordination, that would be integrated by the following organisms: Technical Ministry/ Secretary of Energy, Ministry of Industry and Commerce, Ministry of Public Works and Communications, Technical Secretary of Planning, Ministry of Economy and Secretary of the Environment. The PESE also suggests the creation of an energy regulatory entity (Petroleum, Gas and Electricity), as an independent organism linked to the Ministry of Economy of the Technical Secretary of Planning.

The strategy proposed by the PESE, which has strong and weak points identified in the course of the elaboration of that Strategic Plan, solves an institutional dispersion problem, in the sense of the fragmentation of functions and sector powers in several organisms, without having the jurisdictional limitations totally clear, mainly (at present) due to a lack of a more defined position in the Executive Power to limit the power of the organisms that depend on it. In this sense, it might be positive if the government decided to get ahead with this line of action.

As far as the energy regulatory entity, there should be a definition about exactly what their role would be in the energy sector, the cost/benefit of the regulation, what kind of regulation is really necessary, what it would try to achieve and what their functions would be in the face of the other organisms in the sector. It is not recommendable to create new entities just because they are in the predominant official speech at a certain point in time, but because they should have a real purpose and benefit taking into account the ends and the State structure.

On the other hand, the PESE proposal contains, for instance, problems that the study itself mentions, such as the case of the difficulty to coordinate the interest of several actors in the same Commission. In this sense, it should be mentioned that having Inter Ministry Commissions (with the presence of the highest authorities) does not necessarily imply a convergent, coordinated and cooperative work. It may even constitute a problem at the moment of making viable the sustained and constant presence of the highest authorities in the meetings (it is difficult to get everyone together at once). Besides, on many occasions, as an alternative to the presence of high authorities, representatives with little power of decision are sent to vote in a Commission that has policy making objectives; thus these representatives do not commit themselves, and have to make consultations, with which the works can get delayed and complicated.

Apart from the formal aspects mentioned above, other factors that notoriously harm the performance of an Inter Ministry Commission are the lack of a basic convergent and agreed upon agenda to orient and fundament the actions, the lack of responsible and technical counseling and of operational clear proceedings.



In the case of the formation of Commissions with the participation of several organisms (from the same sector) or several sectors (inter sector), it is advisable that there be collegiate groups differentiated by level, by functions, and if possible, by programmes. That is to say, there should be levels of joint decision and levels of operation or joint execution. The collegiate forums at the level of decision should draw the general guidelines, carry out a follow up to those guidelines, settle conflictive issues, delegate functions and activities and above all, orient the involvement, whether of the operative Commissions or within each organism, as seen fit.

Another factor to be taken into account in this analysis is the temporal variable. The process of institutional adaptation is dynamic and implies changes. Whatever the structure made up to define and implement policies and strategies, we should not lose sight of the need for flexibility and adaptability of that structure considering a continuous process of self-evaluation and of observation of social, economic, political, cultural and technological changes both internally and around the world. In this dynamic process, the specific objectives and the final beneficiaries should not be overlooked either: what is really meant to achieve and for whom the actions are oriented. From our point of view, the main objective of the public policies should be the effective functioning of the institutions and organizations in order to serve, based on principles of social equity and of sustainability, the demands of the various sectors that make up society. The policies cannot favour just some sectors; they should watch for a fairer distribution of the production factors, without losing sight of a value scale in which human dignity be one of the highest values.

Following up on what was said above, the recommendations about the institutional frame of the energy sector would be these:

a) Taking into account both medium and large terms (with a horizon of more than 3 or 5 years), it would be recommendable to carry on with the proposals for the creation of an institutional frame that make coordination easy at the levels of decision and of action, both in the intra-sector and in the inter-sector areas.

In the particular case of the energy sector, the proposal of the creation of a Ministry of Energy and an Inter Ministry Commission seems very suitable to us. However, the factors mentioned above should be taken into account: the Inter Ministry Commission should have a defined political agenda by means of agreements, apart from a clear delimitation of the participation of every one of the member organisms and the level of commitment of these, by means of a Decree of the Executive Power. The delegation of responsibilities, actions and documents should be carried out in a clear way and with explicit proceedings.

b) Taking into account a short term range, it would be recommendable to create Inter-sector Commissions of the programmes that the governments are carrying out, at the management level, or the monitoring of those programmes. These Commissions would consider not only the aspect of the need for a convergent, cooperative and coordinated inter-sector work (or else the relationship among the organisms of a same sector) of the programmes, but also the aspects of decentralization of public powers – consecrated by the National Constitution of Paraguay – and the intercultural elements and the evolution and participation of the direct beneficiaries. Evidently, the relevance of the creation of an Inter-sector Commission will have to be analyzed in each case. The recommendation of a Commission of this kind only makes sense in the case of programmes that involve several organisms and generally when there is no structure already linking these organisms formally.

In the particular case of Crecer con Energía, the formation of the National Committee CCE or the National Committee of Energy and Fight against Poverty is recommended. This Committee would be made up by the organisms of energy and social action, as well as rural development, productive activities and indigenous peoples. Likewise, it would include associations of the communities in the area of the project. The immediate functions of this Committee are, first of all, those of monitoring and counseling of the project. However, it has the object to establish a platform of sustained interaction of its members that goes beyond the project. As far as possible, the duplication of the work will be avoided. If there is another commission already constituted, in operation and with similar goals, it is recommended to establish a joint work modality with that commission already formed.

c) Taking into account medium, long and short terms, it would be fundamental to work for the enhancement of the relationship between the central governments and the departmental

governments, in the sense of strengthening the management of the departmental governments. As the constitutional mandate is to foster the decentralization of the government, the decisions and the actions (in the various areas of competence of the intermediate governments) should be oriented towards a growing participation of the departmental governments in the policies, the programmes and projects.

The departmental governments (as well as the municipalities) are the ones that are closest to the demands and needs of the population. They should therefore participate actively in the public policies of the country, bringing the voice and the knowledge of the local population in their area of expertise. Thus, it is expected that the decentralization increases the efficiency of the resource and the efficacy in the definition and implementation of policies, programmes and projects. For this, it is essential that a growing amount of resources be transferred proportionally to the Departments.

The experience described by the interviewee from the Direction of Road Development of the Ministry of Public Works and Communication is worth remembering: it refers to a better coordinated job between the central government and the departmental governments in the development of road projects. This initiative should be analyzed and the relevance and viability of replicating it should be considered in other areas of the infrastructure.

d) Acknowledgment of the structures of rural organization as a basis for the establishment of a dialogue with the communities. The historical antecedent and the experience gathered with the social organizations at the most different levels (neighborhood commissions, Production Committees and farmer organizations) should be used to strengthen the dialogue in the heart of the communities themselves, and between these and the different levels of decision and action of the public powers.

The experience of the Production Committees can be very important for the development of programmes and projects with a basis on solidarity economy and cooperativism. It ought to be remembered that historically the principles of cooperativism rendered excellent results in the central Chaco in the Mennonite colonies, which constitute one of the most remarkable examples of development in the region. Evidently, the colonies have other cultural and religious elements that make up their life style and that are not present in other groups of the Chaco population and, as a result, they constitute a particular case. But the most important thing is to consider cooperativism and solidarity economy as viable modes and with success possibilities to foster the development of a community. In this sense, it is recommended that in the micro financing components of the CCE project they consider these experiences of cooperativism as a basis for their analyses and proposals.

On their part, the private sector (in particular, the livestock breeding ranches of the Chaco departments, mainly in the western region) does not seem to have – in a general way – an important weight in the social development of the poorest communities in the rural area. However, this sector could (actually, should) be oriented towards becoming more and more committed to a social development with equity criteria in the rural area, establishing a more favourable relationship for rural workers. Besides, there is a great deficiency in what refers to the education of these workers who many times ignore what their rights are and what conditions would be dignified and rightful in their labour relations.

As far as the situation of indigenous is concerned and the sectors of the rural population of minor resources, it is indispensable that education campaigns be carried out, as well as population training that should help not only in the human development but also in the development of entrepreneur attitudes with an impact on productive activities. Again, in this sense, we highlight the importance of the approach of solidarity economy and cooperativism in the development of productive activities and services.

With respect to the infrastructure development in the Paraguayan Chaco, the energy, water and road aspects seem to be a vital trilogy for development, and these aspects are still not resolved, either in the western region or in the department of Ñeembucú, in the eastern region. In the western region the water issue is at a difficult point where there is a confrontation between the local genuine interests and a “politicized” approach (in the sense that some positions in the Aqueduct Commission are considered liable of political negotiation) on the part of the central government.

In line with what was said above, the creation of the Water Corporation for Chaco is auspicious and, at first, it would be recommendable to support this initiative, since it has the important component of the participation of intermediate governments and the civil society. Besides, it would be a brand new experience of a public- private association in the country. It is suggested that the CCE project monitor and analyze this initiative, with a view to verify the viability and relevance of replicating some solutions for the electricity case. It is clear that in the case of electricity the legal situation is different, since it must be taken into account that the ANDE has the legal monopoly of the public supply of electricity. However, the current law foresees the delegation of that prerogative in areas not serviced by the state company.

At the moment there is a bill at the Senate about Production and Transport of Electric Energy. In the second part we have noted some flaws that we see in this bill. In this sense, we consider it highly recommendable that the Senate should carry out a consultation to national experts and the Vice Ministry of Mines and Energy about the institutional aspect. What should be defined is which organism should assume the normative and regulatory authority in the licensing process for the installations of production and transport of electricity. According to the current legal situation, including the functions of the administrative sections of the central government, the most appropriate organism to assume such function is the Vice Ministry of Mines and Energy.

On the other hand, it would be important that the bill consider incentive mechanisms for the new sources of renewable energy. In the way it is proposed, these new sources would “compete” with the traditional sources of energy (in this case, large hydro electric companies and very favourable contracting conditions), which is not convenient for the development of these new sources, that generally have a higher specific cost for their installation.

In the same line of thought, we believe that this bill could be used to introduce some elements that we consider important within the frame of the concepts that Crecer con Energía proposes, namely:

- The creation of a Fund for the universalization of the electric services, whose funds might come partly, from a small recharge in the ANDE invoices (of around 1 to 1.5 %).
- The definitions of isolated systems in regions still not serviced by the ANDE, that might be installed and operate by means of cooperatives or other private legal entities or else by means of associations between these legal entities and the ANDE.
- The extension of the faculties of the high level Commission proposed above to foster programmes of decentralized rural electrification and of incentive to the new sources of renewable energy, as well as to administer the Fund for the universalization of electric service.

Evidently these proposals are substantially changing the initial purpose of the bill. However, we believe that it is totally indispensable to carry out these changes in the short term, whether within this bill or in a soon to come initiative.

Finally, we find it appropriate to make some considerations about the link between energy and productive activities, which is present in the spirit of the project Crecer con Energía.

Regarding this issue, there are no pre- determined recipes. However, what we have seen shows us that the water aspect is vital for the Chaco population, and for the availability of this good or service the energy consideration is also important. There are processes that use renewable energy for water pumping, desalinization and water treatment that must be considered.

Besides, the investigations done by means of focus groups indicate that small livestock breeding activities and some agricultural activities would be predominant in some regions of the Paraguayan Chaco. The needs for energy services must be identified and the solutions must be adequate for each case.

When we speak about the suitability of a technological solution (whether for end use or for energy transformation), we mean not only the accessibility and the availability of a resource, but also the viability and the sustainability of the use of a technology. In this sense, it is highly recommendable to disseminate technologies that use local resources, and if possible that they generate profit for the communities. The techniques used locally must also be considered and the way to modernize them or enhance them, if that should be the case.

In sum, we are highlighting the importance of considering an approach of integrated planning of resources for the energy development and the generation of productive activities of rural development, with a basis on appropriate techniques. Surely, the experiences that will be introduced during the course of the project Crecer con Energía will set a good example to better develop these ideas. We recommend that the toolkit that will be developed within the frame of Crecer con Energía take into account what has been mentioned in these final reflections.

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*APPENDIX I: List of people consulted and interviewed for this Report*

<i>Organism</i>	<i>Interviewee</i>	<i>Position of the interviewee</i>
Government of President Hayes	Dr. Estela Mary Mongelos Ojeda	Planning and Development Counsellor.
Municipality of Mariscal J.F.Estigarribia	Lucio Luis Zavala Brizuela	Person in charge of Projects and International Relations
Social Action Secretary	Carlos Marcelo Mancuello Ríos	Director of Monitoring and Evaluation of Social Policies
INDERT(National Institute of Rural and Land Development)	Eng. Agr. Julio Brun, Ing. Agr. Carmelo Aranda	Manager Inter institutional Coordinator
Ministry of Public Works and Communications	Engineer. Gustavo A. Casal Bogarín	Head Dpt. Of Conventional Energy - DRE- VMME
Ministry of Public Works and Communications	Engineer. Hugo Miranda	Department of Execution- Direction of Road Development
SENASA (National Service of Environmental Cleansing)	Arch. Marcia Cristaldo	Coordinator of the Project BIRF IV (Fourth Rural Project of Water Provision and Sanitation) in Indigenous Areas