

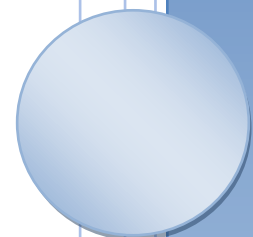
INTERNATIONAL MANAGEMENT AND AGRICULTURAL CONSULTANCY

COSTS AND BENEFITS OF SUPPORT SYSTEMS IN THE RICE SECTOR OF SURINAME

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in cooperation with Dr. Ir. B.G. Grijpstra

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LIST OF ABBREVIATIONS

ADRON	Anne van Dijk Rijstonderzoekscentrum Nickerie
CBW	Commissie Begeleiding Waterschappen
CELOS	Centrum voor Landbouwkundig Onderzoek in Suriname
EU	Europese Unie
LVV	Ministerie van Landbouw, Veeteelt en Visserij
MCP	Overliggend waterschap Multipurpose Corantijnproject
NATIN	Natuurtechnisch Instituut
SML	Stichting ter bevordering van de Machinale Landbouw in Suriname
SPBA	Surinaamse Padieboeren Associatie
SPMU	Suriname Project Management Unit
SUREXCO	Suriname Rice Export Company
SURFF	Suriname Financial Facility
VRE	Vereniging van Rijstexporteurs

FOREWORD

Honestly speaking: after I gave a presentation on the possibilities of cost-reduction in the rice industry (on request of the Chamber of Commerce, some 10 years ago) I made the silent oath to quit with any more involvement in the rice sector (in the coastal plains of Suriname anyhow). And this because of the fact on that occasion I was forced to say the same things I said (sorry, we said) 10 years before the date of this particular presentation. Makes you feel fed up and tired and sad. After some persuasion from my colleague and friend A. Zalmijn I'm back again. Strange how life can be!!.

Formally speaking: I want to thank all the officials from both the government and private sectors who have been very helpful, less helpful and completely unhelpful, for their assistance and suggestions in constructing this (unusual) report.

Special thanks to the members of the former State Rice Commission and SUREXCO: the ideas and concepts developed in those years, together with stakeholders of the rice industry have proven to be still valid and applicable.

Thanks to Bouwe Grijpstra of the SPMU-team who had the patience to let me do my own thing in my own time; in fact this report should have been finalized two weeks ago: See!!

Last but not least: special thanks (and a brasa) to Miss Jemé of the Ministry of Agriculture for bringing some colour into the dull sentences (and nonsenses) I ordered her to put into her computer.

Finally: I followed the TOR as consciously as I could but made no recommendations because (to me) it would be like repeating all that was laid down in the report "Organizing The Rice Sector in Suriname" issued in 1988. I hope the reader of this report will forgive me for that omission.

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André W. Graanoogst

1. INTRODUCTION

As an integral part of the study of support systems to the competitiveness of the rice sector, information on the costs and benefits of the support systems in Suriname was collected.

The support systems include both government institutions and non-profit associations that are engaged in and provide for assistance to rice producers, processors and exporters with regard to:

- research
- extension and education
- seed certification
- seed production
- irrigation and drainage
- coordination
- regulation
- standardization
- quality control
- statistics
- redistribution of proceeds through levies and subsidies
- product promotion and branding
- safeguarding of common interests and advocacy.

During the consultations and discussions needed for this data to be collected, it was felt that for a more comprehensive overview of the support systems also the role of commercial institutions such as banking and insurance and providers of inputs should be included in this exercise.

2. PRESENT SITUATION IN THE RICE SECTOR

At present rice cultivation and processing is concentrated in the Western Region of Suriname (Nickerie, Coronie and Saramacca district). The following table shows that the main producing area was the Nickerie district.

Table 2.1. Cultivated rice acreage in Suriname (ha)

Year	Nickerie	Other districts
2002	36,473	3,577
2003	48,606	3,819
2004	45,695	3,325
2005	42,987	2,579
2006	47,766	2,466

Source: Annual Report 2006 Ministry of Agriculture (not yet issued)

The contribution of the sector to exports and local consumption during the last three years is presented in the following table (USD).

Table 2.2. Value (in USD) of rice export and local consumption, 2004-2006

Year	value (USD)		
	Exports	Local consumption	Totals
2004	11,900,000	10,500,000	21,400,000
2005	8,900,000	10,800,000	19,700,000
2006	11,516,000	11,100,000	22,616,000

According to national statistics the contribution to the GDP of the agrarian sector (including forestry) amounted to 4.8% in both 2005 and 2006. Several attempts were made to obtain the relevant figures for the rice sector but to no avail. Rough estimates however put this figure in the range of 1.5 – 2%, as fisheries proved to be the leading sub-sector during those years and the banana industry just getting out of a deep decline. However, the following statement might change this narrow scope on the impact of both agriculture and the rice industry on the economy.

“Our research suggests that when all the backward and forward linkages in the commodity chain are considered, such as input supplies, transport, storage, agribusiness, contribution to exports, agro industry and services etc., agriculture’s contribution to national development is three to seven times higher than the percentages reported in national statistics. For example the official statistics indicate that agriculture’s contribution to the GDP in Trinidad and Tobago averages less than one percent. However, our most recently completed study shows that when all the backward and forward linkages are considered. This figure is likely to increase to four or five percent

(Source: IICA – Agriview vol 11 no. 2. 2005: by Dr. Chelston Brathwaite).

Because of the fact that rice production is concentrated in the Nickerie district the greater part of the research for this report was carried out in this region.

3. METHODOLOGY

As a first step the (groups of) players that are linked and contributing to the sector were identified. This exercise resulted in Diagram 1: in this diagram the various support systems are presented whereby the top consists of governmental and semi-governmental institutions: at the bottom the private organizations are presented (see annex 1).

Next, many discussions were held with the various officials representing the institutions and organizations listed in the diagram. Those discussions were focused on the following subjects:

1. the institution's role with regard to the sector
2. the annual budgets for 2005 and 2006 with regard to the sector (investments and operational costs)
3. the institution's perception of any output as the result of its efforts.

With regard to the government and semi-government institutions this approach worked out rather satisfactorily, though for some of these institutions it took some time to collect the required information and make the necessary division between rice and non-rice data.

As for the providers of services like transportation and aircraft operations: these are considered to be an integral part of the industry and so are not treated separately in this report.

Collection of information from the private sector proved to be a very different story: especially banks and insurance agencies were understandably very cautious and in most cases even reluctant to hand over the relevant data.

Therefore, to have some insight into the bank's important role in the sector some ad hoc calculations had to be made to arrive at figures that are somehow realistic.

4. ROLE OF THE SUPPORT SYSTEMS IN THE RICE SECTOR

4.1 GOVERNMENT

Government support to the sector is provided by the following departments.

4.1.1 Ministry of Agriculture (LVV)

The department of Agriculture is responsible for the following activities:

1. **extension and education:** to carry out this activity a field staff is available in the Western region
2. **research:** the greater part of rice research is being conducted by ADRON, a semi governmental research institute. In the past also CELOS and the Research Station of the Ministry of Agriculture have been engaged in research on rice.
3. **water management:** this activity includes the maintenance of secondary waterways, roads and water structures within so-called "land reclamation polders" in the region (Middenstandspolder, Henar I and II, Europolders and Nannipolder). Incidentally also investment projects are being undertaken. Both the establishment and maintenance of these secondary waterworks are being carried out by contractors supervised by staff experts of the Ministry.
4. **standardization and quality control.**

In the (very near) past standards were set for farmers paddy. The prices paid by paddy buyers and millers depended on the quality (A or B) of the wet paddy. In case of dispute quality control was carried out by official of the Ministry of Agriculture using laboratory-equipment. In practice the outcome of their intervention was binding and was honoured by the relevant parties.

In the present situation quality distinctions are not made any more. As a result of the declining paddy production during the last years the demand has outgrown supply of the product.

Because the millers have overcapacity they are forced to buy any paddy they can lay their hands on. Exceptions are a few (export) millers that have their own paddy-producing acreage.

As can be expected this situation has resulted in a noticeable deterioration of the quality of the produce: according to one subject-matter specialist it has even led to batches with 30% red rice being banned for export to overseas markets.

In 2003 the CARICOM Rice Standard (a standard for rice throughout the CARICOM) came into force. The Standard applies to both locally sold and exported rice. Although Suriname has ratified this agreement, formal legalization is still pending. Furthermore the local version of this Rice Standard is used for export rice only.

The quality control on export rice is being carried out by officials and lab-equipment of the Ministry of Agriculture. Despite the presence of this facility it has occurred quite often that overseas buyers preferred a (in their opinion) more reliable certification institute. In those situations Rice Lab, a private certification company based in Guyana, was brought into play.

With regard to export rice it should also be mentioned that most of the export millers have their own equipment for quality control. Nevertheless, for export an official certificate has to be obtained. Finally mention should also be made of the Bureau of Standards within the Ministry of Trade and Industry established in October 2007.

However, the role this Bureau will play with respect to the sector is still unknown.

5. **statistics:** collection of data on field production is the responsibility of the Ministry of Agriculture. Production data (acreage) are collected every season. Contrary to past practices, trial cuttings are not carried out any more, so the total small farmers' production is based on estimates. Information on the large farms is provided by the farm owners on a voluntary basis.

Apart from these figures, data are also collected by the National Bureau of Statistics: these production statistics are voluntarily provided by the processing plants.

4.1.2 Ministry of Finance (MF)

Intervention by this Ministry into the sector appears on two levels. First, all rice exports are taxed with an export levy of 10 SRD/ton (USD. 3.57/ton). 90% of these funds are flowed back into research for the sector. As ADRON is the only player in this field at present, this contribution is channelled to this institution. For 2005 and 2006 the amounts involved were respectively USD 99,000.00 and USD. 109,000.00

Secondly, rice farmers have been eligible for reimbursement of a certain amount of money related to their use of fuel, established at 125 litres of fuel per ha. This was done for the seasons 2003/4, 2005/6 and 2006. The money was provided by the Ministry of Finance while the Ministry of Agriculture was responsible for keeping the required records, the documentation and arranging the payment to the farmers.

For the year 2006 the total sum paid to farmers amounted to USD. 1,703,240.00. Each season a total of approximately 1270 farmers benefited from these payments.

4.1.3 Ministry of Transport, Communications and Tourism (TCT)

The sole involvement of the Ministry of TCT in the sector is its responsibility for the harbour facilities nationwide. With respect to this part of the sector requirements it can be concluded that due to the deplorable state of the Nickerie-harbour nearly all exports take place through the harbour in Paramaribo, at a distance of approximately 240 km.

4.1.4 Ministry of Public Works (OW)

In terms of annual expenditure this department can be considered the main contributor to the rice sector. The Ministry of Public Works' responsibilities are the management of all main waterways, roads, bridges, sluices etc in both urban and rural areas. To meet this job the regional section of the Ministry of Public Works owns a small number of equipment like excavators, graders, trucks and pickups. Although some work is done by this rather outdated equipment the larger part of the maintenance and investment projects (new roads, canals, etc.) are tendered to contractors.

4.1.5 Ministry of Regional Development (RO)

An important task of the Ministry of Regional Development is to coordinate and supervise the different departments in the districts. Thus the District-Commissioner (DC) is administratively the highest ranking government official in a district.

Apart from this administrative function, the Ministry of Regional Development is also responsible for the management of so-called tertiary infrastructure, in particular the minor roads and

trenches in urban and semi-urban areas and in the polders that are not being taken care of by the Ministry of Agriculture. To this end the RO department avails of some small equipment and a substantial workforce of both men and women. Most of the small maintenance jobs in urban and semi-urban areas are done manually.

Larger works are tendered and carried out by contractors.

Quite recently the RO department has started incidental collection and disposal of waste from rice mills (chaff). A comprehensive and structural solution to this disposal problem is still being studied upon: plans for energy generation, utilizing this waste product are being discussed presently.

Last but not least, Ministry of Regional Development has been attributed the responsibility for (administrative) assistance to the recently established "water boards modern style".

According to a spokesperson of the department the funds for this activity have yet to be allocated by the central government (see water boards). With respect to this financing of development activities in the various districts of Suriname, mention should be made of the fact that since 2006 a process of decentralization of power has been put into motion.

This will entail that the district administration will be in the position to collect a range of locally generated revenues and taxes, thus broadening its revenue base. These own funds can be utilized for development projects in the region.

4.1.6 Ministry of Trade and Industry (HI)

The impact of this Ministry on the sector is mostly of an administrative nature. The Ministry's main activities are focused on:

- a.** the issue of licenses for:
 - the establishment of processing units
 - the import of inputs
 - the export of rice, including preparation of export documents for customs clearance.
- b.** trade negotiations with regard to rice and other agricultural products. These negotiations are mainly conducted with the EU, the CARICOM partners and the World Trade Organization.

As mentioned before, quite recently the Bureau of Standards has been installed within this Ministry. According to the Ministry's spokesperson the Bureau is expected to pay attention to the following aspects of local produce:

- product quality
- packaging
- procedures for quality analysis.

4.2 RESEARCH INSTITUTES

Up to the 1970's the bulk of rice research was done by the Wageningen Rice Foundation for Mechanised Agriculture (SML). To this purpose the Foundation had its own research section and almost all the aspects of rice cultivation were included into the research programs. With the decline and finally the total break down of the Foundation's production all research activities were abandoned. Rice research was then taken over by the para-statal institutions discussed below.

4.2.1 ADRON

This research station was established in 1974 as the working entity for the concurrently established SNRI (National Institute for Rice Research). This institute was set up to be an umbrella organization, embracing all research concerning the rice sector. The actual activities of ADRON are:

- seed breeding
- seed production
- research on crop management
- research on post harvest practices
- providing extension services to seed farmers
- information centre for paddy producers

In the past ADRON has also undertaken research with regard to:

- soil quality in the rice polders
- effects of phosphate application
- water utilization in rice fields (water level during the cropping season)
- use of chemicals for maintenance of waterways
- methods and equipment for land preparation.

Limited financial resources have forced ADRON the institute to cut down on research and to concentrate on the activities that are presently undertaken.

Although heavily understaffed and (according to the director) limited financial resources, the breeding programs have resulted in an increase in per ha production from 4.1 to 4.7 tons of wet paddy during the stations' existence. These data have been substantiated by trial cuttings on selected farms every season. This practice has been standard procedure for the station during the past ten years. Furthermore the station initiated a seed farmers program: small farmers are induced to produce ADRON-certified seed for their colleague paddy growers. To this end the station is supplying them with the required seed varieties. A total acreage of approximately 450 ha of farmers' fields are already allocated for this objective. ADRON intends to expand this acreage cultivated by small farmers to 800 ha in the two coming years (2008 and 2009). According to ADRON in total 1000 ha is required to meet the expected demand for certified seed. In connection with the seed farmers program ADRON has stimulated the establishment of a Seed Growers Association. Apart from the activities mentioned afore the station provides extension and information to farmers via local T.V. and radio stations through daily and weekly broadcasts.

4.2.2 CELOS

The Centre for Agricultural Research in Suriname is based in Paramaribo. It has no auxiliary office or station in the rice producing regions.

Attempts made in the past to start up a rice research section in this institute have not been successful. At present CELOS is not involved in research related to the rice sector.

4.2.3 Agricultural Research Station (Landbouwproefstation)

Different from ADRON and CELOS the Agricultural Research Station is an integrated part of the Ministry of Agriculture. It is based in Paramaribo. In the past the Agricultural Research Station cooperated closely with the SML Foundation that produced rice on approximately 10.000 ha. But in the last ten years no rice research has been undertaken by this research institute.

4.3 WATER MANAGEMENT

Water management is considered to comprise of:

- maintenance of waterways
- attendance and maintenance of waterworks (sluices etc.)

Historically water management was in the hands of the Ministry of Agriculture, the Ministry of Public Works and the Ministry of Regional Development. In 1984 the Multipurpose Corantijn Project (MCP) has been established as a public authority by decree E-48. Its activities have been mainly directed at:

1. the management of the Wakay pumping station (situated on the Corantijn river)
2. the management of the MCP canal connecting the pumping station with the polders in the Nickerie region.

In 2006 the water management in the rice producing region has entered a transitional stage with the introduction of the concepts of regional and local water boards.

4.3.1 M.C.P. Regional Water Board

In June 2007 the MCP Authority has been transformed into a regional water board for the management of the main infrastructure and assistance to the local water boards in the region. As before the operation of the Wakay pumping station is completely carried out by MCP-personnel. It is planned to tender the maintenance of the MCP canal to contractors. Up to now the Regional Water Board is not in the position to generate its own funds through collection of dues from the local water boards and other water users. The staff and the maintenance of the pumping station and canal are still financed out of the budget of the Ministry of Agriculture. To this end annual and quarterly budgets are submitted.

4.3.2 Local Water Boards

Local water boards are not a new phenomenon in the rural scenery of Suriname. During the 50's and 60's of the previous century water boards played a major role in the management of the irrigation and drainage systems of the smallholder polders. In those times farmers (trans)planted paddy only once a year during the main rainy season. As rice, for important part, was first of all produced for own consumption everyone in the polders planted paddy during that season. The waterways within the polders were regularly maintained by the farmers themselves: matter of fact, according to their land-lease or landowner's papers this was even obligatory.

With the introduction of the double cropping system (two crops per year) gradually some farmers every now and then skipped one season and when doing so did not contribute to the maintenance of their waterways. Due to political intrigues, the system of sanctions against this kind of behaviour became ineffective. That resulted in an increase of bad behaviour, erosion of management skills of water board leaders, farmer's reluctance to pay for maintenance, etc. etc. Finally the water boards ceased to operate.

In 2006 after more than two decades of political and legal legwork the act on water boards new style was passed by the National Assembly: as a result of this action twelve water boards have been designed for the region of which six have already been established officially. In tandem with these developments the MCP Authority has been transformed into a regional water board to assist and guide the sub-regional boards. The committee of the regional water board is to be elected by the local water boards.

The local water boards are expected to:

- keep records of land use in the polders
- collect farmers financial contributions
- take responsibility for maintenance of the dry and wet infrastructure of the polders.

This will necessitate the transfer of a substantial part of the funds for maintenance of the wet and dry infrastructure that now are controlled by governmental institutions.

Both the regional and local water boards are under the supervision of the Districts-Commissioner and his administrative officer. To this end the District-Commissioner established a new commission in July 2007.

This Commission for Guidance to the Water boards (CBW) consists of staff members of the Departments of Agriculture, Public Works and Regional Development and the MCP Regional Water Board.

4.4 PRIVATE SECTOR

Private sector institutions operating within the sector are both commercial and non-profit organizations. The commercial entities are the following.

4.4.1 Financial institutions

4.4.1.1 Banks

In the region seven banks are in business, all of them affiliates of banks that are based in Paramaribo, the national capital. Out of this amount six banks are really engaged in financing the industry apart from financing of other activities. Financing of the rice sector happens on the following levels.

1. investment financing (machinery and equipment, buildings, means of transport, establishment of (large) farms)
2. seasonal credit to farmers (on a per crop basis): according to a bank's spokesperson this credit normally covers 40 – 50% of the production costs of a crop, although full financing of the production outlays also occurs.

In the past several attempts have been made to get an idea of the sector's financial position relative to the banking institutions as a whole. Due to the bankers' reluctance to supply the relevant information these attempts were bound to fail. Nevertheless incidental research and surveys have produced some data that are presented in the following tables, thus providing some insight into farmers' "borrowing behaviour".

Although the data of table 4.1 and 4.2 are from some eight years ago it is a fact that the banks' financing of agriculture in general, and of the rice sector in particular, was very tight during 1999/2000 and 2000. This gives credit to the assumption that the borrowing behaviour has not changed that much in the past decade.

Table 4.1 Financial sources for operational costs and investments in 1999 – 2000

Source of finance	Number of farms	%	Acreage (ha)	%
Own money	51	54	1,017	33
Bank	2	2	98	3
Relatives	0	0	0	0
Own money and relatives	29	31	495	16
Own money and bank	8	9	734	24

Source of finance	Number of farms	%	Acreage (ha)	%
Bank and relatives	1	1	600	20
Bank, own money and relatives	3	3	98	3
Total	94	100	3,041	100

Table 4.2 Financial sources of operational costs and investments relative to farm size 1999 – 2000

Source of finance	Farm size			
	0-12 ha	13-24 ha	25-74 ha	> 74 ha
Own money	67.4	42.4	53.8	20.0
Bank	0.0	3.0	0.0	20.0
Relatives	0.0	0.0	0.0	0.0
Own money and relatives	30.2	39.4	15.4	20.0
Own money and bank	2.3	3.0	23.1	20.0
Bank and relatives	0.0	6.1	0.0	20.0
Bank, own money and relatives	0.0	6.1	7.7	0.0
Total	100.0	100.0	100.0	100.0

Source: Bedrijfsomgevingsfactoren, waaronder kostprijs ontwikkelingen, in de rijstsector

In a survey by the SPMU in April/May 2007 75 farmers were interviewed on various aspect of their input supply. Their sources of finance are portrayed in table 4.3.

Table 4.3 Inputs and credit (Financial sources)

	Farm size			
	1 – 3 ha	6-10 ha	20 + ha	total
Own money	15	7	6	28
Relatives	6	7	2	15
N.G.O. (Private Foundation)	1	-	-	1
Processor (mill owner)	-	2	2	4
Banks	3	9	15	27
Total	25	25	25	75

Source: SPMU – TA Survey 2007

4.4.1.2 Informal financing

This group of money suppliers mainly consists of relatives and friends. According to a personal source (himself a 24 ha rice grower) the main body of those relatives are living overseas. Contrary to the situation of 1999/2000 (see tables 4.1 and 4.2) when this group of financiers as sole money suppliers for a season was non-existent, the SPMU – TA Survey of 2007 indicates that financial support by relatives is growing (20% according to the 2007 survey). Financing by paddy buyers and mill-owners doesn't seem to play a very important role although some large millers are known to have made so-called package deals with groups of farmers. In these agreements the buyer/miller is providing for certain inputs (fertilizer and pesticides mostly) under the condition that he will get the harvested produce.

4.4.1.3 Insurance agencies

Three insurance agencies are working in the region. They are affiliates of main offices based in Paramaribo. The insurance agencies' involvement in the sector consists of:

1. fire insurance of processing and storage facilities
2. health insurance for rice mill workers: this is only done by the larger rice mills, most export mills
3. insurance against accidents in processing plants.

Crop insurance is an unknown phenomenon in the sector and, strange enough; machinery like tractors, combines etc. are not being insured either, although they appear on the public roads and have to behave as and are considered to be part of normal traffic.

4.4.2 Input providers

4.4.2.1 Machinery and equipment

Due to the recession the rice industry was confronted with in the last ten years all the main suppliers of machinery and equipment for field operations have closed down their shops, repair shops and spare part supply in the region. That same recession has also caused the slowing down in investment in this crucial part of mechanized rice production. Only large millers who also are paddy producers have been in the position to maintain the working conditions of their equipment for both field and processing operations.

All importers of machinery confirmed that during the last five years almost no sales to small farmers were recorded. At the same time a small number of these small producers have been in the position to obtain second-hand tractors from relatives overseas. The following tables present some indications on the investments made in rice equipment.

Table 4.4 Investments in the rice industry 1996 – 2000 (x1000 USD)

	investment (x 1000 USD)				
	1996	1997	1998	1999	2000
Machines	222.8	145.5	224.5	131.5	64.8
Buildings	4.8	4.7	5.4	2.9	17
Equipment	36.8	28.0	36.6	65.9	8.9
Totals	264.4	178.2	266.5	200.3	90.8

Table 4.5 Investments in machines relative to farm size (1000 USD)

Farm size	investment (x 1000 USD)				
	1996	1997	1998	1999	2000
0 – 12 ha	0.0	1.2	8.4	8.2	0.0
13 – 24 ha	17.5	7.8	66.6	5.8	13.8
25 – 74 ha	13.6	5.7	25.9	5.5	4.6
> 74 ha	191.6	130.8	123.6	112.0	46.4
Totals	222.6	145.5	224.5	131.5	64.8

Source: Bedrijfsomgevingsfactoren, waaronder kostprijs ontwikkelingen, in de rijstsector.

Finally a recent sample survey among smallholder rice farmers with tractors illustrates the disastrous situation of the present state of the machinery.

Table 4.6 Age structure of smallholders' tractors

tractors	#	percentage
Tractors over 25 years	28	46.7
Tractors 15 – 25 years	26	43.3
Tractors 10 – 14 years	5	8.3
Tractors 5 – 9 years	1	1.7
Tractors 0 – 4 years	0	0.0
Totals	60	100.0

Source: SPMU – TA Survey 2007.

4.4.2.2 Other input providers

The category of other input providers consists of the suppliers of materials like fertilizers and pesticides, fuels and building materials. Like the other commercial entities that cater to the sector

they have also felt the pinch of the contracting industry in the years of recession. But unlike the machinery/equipment sellers they could manage to stay in the business: alas, every ha of sowed paddy needs fertilizer, pesticides etc. In the region the bulk of the fertilizer is supplied by two companies: another four to five small providers is also active in this field. For pesticides we see the same picture although local rural shops also deal in these products.

Fuels are delivered by local branches of the well known international oil companies (SHELL, EXXON, TEXACO): the national State Oil Company has a share in the market with the supply of special oil for paddy dryers.

4.5 INTEREST GROUPS

In the first diagram the following interests groups have been distinguished.

4.5.1 Farmers' Organizations

The only functioning farmers association SPBA, is probably the latest development in relation to the many farmers organizations the sector has given birth to in the past. Most of them are factually not functioning any longer. The SPBA was established in 2001. The organization claims to have a list of 800 members at this moment of which approximately 400 regularly pay their contribution.

4.5.2 Exporters Association

This association of exporters VRE has a rather long history. Established in the 1970's the association achieved formal status in 1990. Most of the export millers are organized in the VRE, but also some of the small millers with no or irregular exports participate.

As a result of the political leverage the VRE has acquired (as a whole and because of the influence of some individual members) the association has some access to policy makers.

Mention should here be made of the fact that trough this political influence the VRE succeeded to persuade the government to unwillingly "liberalize" the rice sector in 1992 which in turn resulted in the dismantling of the then existing consultation, coordinating and steering institutions for the commodity chain, namely the State Rice Commission and SUREXCO.

4.5.3 Politicians/lobbyists

As an interest group politicians do not play an important role in the framework of support systems. However mention should be made of individuals in politics, mostly representatives of Nickerie in the National Assembly, that occasionally try to break a lance for the sector and argue for more government attention and policy making.

Another known lobbyist group is a group of intellectuals (most of them familiar with agriculture) organized in Agriforum. By way of regular (public) presentations and publication of an occasionally issued newsletter this group also makes attempts to induce government and politicians to formulate and execute a sound agri-policy.

4.5.4 Consumers

One consumers' organization (without membership) exists in Suriname. Up to now this institution has not given special attention to rice. Nevertheless, it has to be considered a support system because of its involvement with food security and buying power.

5. COSTS OF THE SUPPORT SYSTEMS

In this chapter the costs (actual outlays and calculated) of the various support systems are presented. Where costs could not be visualized and/or quantified a not available (n.a.) or not quantifiable (n.q.) notation will be placed.

For certain support systems the data had to be derived on an ad hoc basis from non explicit information.

One remark has to be made with regard to the costs of the infrastructure (waterways and roads). Unlike durable assets like factories and machinery, these "eternal" assets should be treated differently; that is, they should not be depreciated over a certain amount of years. In the context of this report maintenance costs of canals and roads are considered to be re-investments to keep this assets in good condition, in order to serve the purposes they were constructed for, or, even better, to serve more purposes in the near and far future.

5.1 GOVERNMENT

Table 5.1 Cost of support systems (x 1000 USD)

	2005		2006	
	Operational costs	Investments	Operational costs	Investments
Min. of Agriculture	108	174	122	387
Min. of Public Works	424	569	475	975
Min of Regional Dev.	58	137	69	135
Min. of Trade	n.q.	-	n.q.	-
Min. of Finance	n.q.	-	n.q.	1,703
Min. of TCT	n.q.	-	n.q.	-

Explanatory remarks

Ministry of Agriculture

- operational costs: annual costs for that part of the personnel; materials and transportation related to rice: Furthermore the costs of maintenance of bridges and sluices are included.
- investments: includes the maintenance costs for waterways (irrigation and drainage canals) and roads in the rice producing polders. No new investments occurred in 2005 and 2006. The high level of maintenance in 2006 was the result of overdue maintenance on the infrastructure.

Ministry of Public Works.

50% Of both the operational costs and investments of the Ministry of Public Works have been allocated to the rice sector. The investment costs include the maintenance of bridges and sluices, an important activity within this department. This 50% allocation only applies for the infrastructure in the rice producing areas (Eastern and Western polders). Urban areas like Nieuw Nickerie, the Henar-centre and Wageningen have been excluded from the computations. Like the Ministry of Agriculture the high investment figure for 2006 is the result of back repairs and overdue maintenance of infrastructure and waterworks.

Ministry of Regional Development

- operational costs: only a small staff in this department is involved in the maintenance of the local infrastructure: 40% of recurrent costs have been allocated to the rice sector.
- Investments: all maintenance works on roads and waterways are done by contractors: 40% of the maintenance costs have been allocated to rice.

Ministry of Finance

It was not possible to quantify the operational costs. The investments in 2005 concerns the retribution of fuel tax paid to rice farmers (on the basis of 125 liters of fuel per ha per season).

Ministry of Trade

The collected information could not be quantified.

Ministry of Transport, Communication and Tourism

No quantified information was available.

5.2 RESEARCH

Table 5.2 Cost of research

	2005 (x1000 USD)		2006 (x1000 USD)	
	Operational costs	Investments	Operational costs	Investments
ADRON	307	12	327	9

Explanatory note:

ADRON's funds are financed by:

1. contribution of the rice sector
2. contribution of the Government

5.3 WATER MANAGEMENT

Table 5.3 Cost of MCP water board

	2005(x1000 USD)		2006 (x1000 USD)	
	Operational costs	Investments	Operational costs	Investments
M.C.P. Water Board	250	189	357	56

Explanatory note:

1. the operational costs include all personnel, materials, transportation and maintenance of the pumping station at Wakay.
2. the investments comprise the acquisition of boats, cars and equipment.

It is useful to note that in both years presented no maintenance of the canal was undertaken. Because of this a full scale overhaul operation for the Corantijn canal took place in 2007. This EU-financed programme has almost been finalized.

As for the water boards in water management: although six boards have been formally installed, they are not yet in operation.

5.4 PRIVATE SECTOR

5.4.1 Financial institutions.

Table 5.4 Cost of financial institutions

	2005 (x1000 USD)		2006 (x1000 USD)	
	Operational costs	Investments	Operational costs	Investments
Banks	n.a.	± 2.800	n.a.	± 3.600
Informal Finance	n.a.	± 1.200	n.a.	± 1.800
Insurance	n.a.	n.a.	n.a.	n.a.

Explanatory remarks:

Banks

Based on the scattered information provided by some banks and the farmers' borrowing behaviour (see tables 4.1, 4.2 and 4.3) some ad hoc calculations were made. The outcome was (confidentially) not rejected as unrealistic by financial sources.

Informal Finance

The figures were obtained by making ad hoc calculations based on the tables mentioned afore. However no source of confirmation was available. They have to be observed as rough estimates.

Insurance

No data could be obtained.

5.4.2 Input providers

No workable data could be obtained from this support system. It is evident, however, that as most machinery and equipment dealers in the region have closed down, disinvestments in this system have taken place. With respect to the other input providers: it was observed that no investments were made during the last years.

5.4.3 Interest Groups

None of the formal interest groups is known to keep any records, except the farmers association (SPBA) that records the contributions of its members. The amounts contributed and the ways these funds are utilized were not revealed by the SPBA-representatives.

6. BENEFITS AS A RESULT OF THE EFFORTS OF THE SUPPORT SYSTEMS

The description of the role of the various support systems indicates that all deliver their own contribution (or are supposed to do so) to the sector. In their activities the systems do not act as independently operating actors: the interactions between the various systems are evident. To have the commodity chain function properly all systems have to cooperate to create the right environment, that is, the right conditions as illustrated in diagram 2 (see annex 2).

Having said this, it is obvious that attribution of any benefit to a specific support system becomes a difficult (if not unfair) undertaking.

Furthermore, an action performed at this very moment might result in benefits that will materialize after some years. In last resort, all efforts of the support systems are aimed towards one objective, that is: to improve the status of the sector (more quality paddy, more quality rice, higher profits for all commercial parties involved and last but not least food security and food safety).

Finally, one important external factor should be taken into consideration when evaluating the support systems performance during the short period in question (2005 and 2006).

After almost a decade of low rice prices (that lay at the bottom of the decline of the sector) the present trend of rising prices for grains will without doubt provide a stimulus for the upward development of the sector.

In this paragraph an attempt will be made, however, to distinguish between the various systems and, where this is feasible, quantify the benefits in the years 2005 and 2006 for the sector and the various stakeholders.

6.1 GOVERNMENT

The contribution of the Government is presented in Table 6.1.

Table 6.1 Contribution of the Government

Ministry	Amount (x 1000 USD)	Benefitting stakeholders	
		directly	indirectly
<u>Ministry of Agriculture</u>			
• Improved cropping practices	n.q	farmers	processors
• Maintenance of infrastructure in small farmers polders thus ensuring availability of irrigation and drainage and reasonable access roads.	n.q	farmers	processors
<u>Ministry of Public Works</u>			
• Maintenance of infrastructure	n.q	farmers	processors
<u>Ministry of Regional Development</u>			
• Maintenance of infrastructure	n.q	farmers	processors
• Establishment of water boards	n.q	farmers	processors
<u>Ministry of Finance *</u>			
• Retribution of fuel cost reducing cost of production	n.q	farmers	processors
<u>Ministry of Trade and Industry</u>			
• Improvement of export condition to EU	n.q	processors	farmers
• Development of new export markets in Brazil and CARICOM	n.q	processors	farmers
<u>Ministry of Transport, Communication and Tourism</u>			
• -----			

***Note:** although this ministry invested (that is, paid farmers) a sum of USD.1,703,240.00 these payments are considered to be a result of farmers pressure on governments: hence these efforts are listed under interest groups (farmers coops).

6.2 RESEARCH

The contribution of research is presented in Table 6.2

Table 6.2 Contribution of research

Institution	Amount (x 1000 USD)	Benefitting stakeholders	
		directly	indirectly
ADRON			
<ul style="list-style-type: none"> Improved rice varieties increasing paddy yields from 4.1 to 4.7 tons/ha (average yield) = 8 bags ad 79 kg at USD 9.25/bag 	0.07/ha/year	farmers	processors
<ul style="list-style-type: none"> Improved cropping practices. 	n.q	farmers	processors
<ul style="list-style-type: none"> Expansion of seed acreage to 400 ha 	n.q	farmers	processors

6.3 WATER MANAGEMENT

The contribution of the MCP water board

Table 6.3 Contribution of MCP water board

Institution	Amount (x 1000 USD)	Benefitting stakeholders	
		directly	indirectly
MCP water board			
<ul style="list-style-type: none"> Availability of irrigation water 	n.q	farmers	
<ul style="list-style-type: none"> Fuel costs in 2005 and 2006 amounted 	245	farmers	

6.4 PRIVATE SECTOR

The contribution of the private sector is presented in Table 6.4

Table 6.4 Contribution of the private sector

Institution	Amount (x 1000 USD)	Benefitting stakeholders	
		directly	indirectly
Banks			
<ul style="list-style-type: none"> Providing investment and seasonal credit to producers (2005 & 2006 totals) 	6,400	farmers & processors	
Informal finance			
<ul style="list-style-type: none"> ----- 	n.q	farmers	processors
Insurance agencies			
<ul style="list-style-type: none"> ----- 			

6.5. INPUT PROVIDERS

The contribution of the input suppliers is presented in Table 6.5

Table 6.5 Contribution of the input suppliers

Category	Amount (x 1000 USD)	Benefitting stakeholders	
		directly	indirectly
<u>Machinery & equipment</u>			
• -----			
<u>Other providers</u>			
• Use of (cheaper) State Oil fuel for burners, thus reducing cost for drying			processors

6.6 INTEREST GROUPS

The contribution of interest groups is presented in Table 6.6

Table 6.6 Contribution of interest groups

Group	Amount (x 1000 USD)	Benefitting stakeholders	
		directly	indirectly
<u>Farmers Coop</u>			
• Initiative to organize farmers	n.q	farmers	
• Initiative for subsidy on fuel	1,703	farmers	
<u>Exporters Association</u>			
• Contribution to research ad USD 3.75/exported ton (2005 & 2006)	208	farmers	
• Improvement of export conditions	n.q		
<u>Politicians/lobbyists</u>			
• EU support to revamp the sector	9.3	all stakeholders	
<u>Consumers*</u>			
• Local demand for rice (food security and purchasing power) 75,000 tons of rice products in 2005 & 2006	22,000	all stakeholders	

* **Note:** overseas consumers are not considered to be an interest group within the scope and context of this report.

7. GAPS IN THE SUPPORT SYSTEMS AND THE POSITION OF THE STAKEHOLDERS

In this final paragraph the gaps in the support systems and the position of the stakeholders with regard to these gaps will be indicated. In other words, the shortcomings of the support systems in creating the right environment for the commodity chain will be identified.

For this exercise diagram 2 has been expanded into diagram 3 (see annex 3).

In the diagram the commodity chain and its stakeholders (column A) are confronted with the support systems (column C). The stage for confrontation is set by the conditions (column B) required by the commodity chain and the stakeholders to function properly and sustainable. From their perspective the support systems functioning and short coming (gaps) can be described as follows.

Stakeholder	Conditions and the gaps of support systems
<p>Farmers</p>	<p><u>Irrigation water</u> At present four entities are engaged in the supply of irrigation water with no institutional umbrella accountability. As stated before, installation of water boards has brought this situation to a transitional stage as water boards are to take over a substantial part of the water management system. Still the relationship between these boards, the MCP regional water board and the Regional Development Department needs clarification, especially with regard to some technical aspect (attendance) of the water management system. Also the role of the recently set up Commission for Guidance to Water-boards (CBW) needs speedy clarification to get the water boards moving and have them really functioning as water boards new style. With respect to the functioning of this Commission it is essential to make this institute fully equipped to function as an entity in its own right and operate independently. Needless to emphasize that close collaboration between the CBW and the MCP regional water board is essential for the formulation of a policy on the management of the infrastructure. And of course the required funds and staff should be made available to the parties involved. Finally, the responsibilities of both the Commission and MCP regional water board have to be specified, to prevent overlap.</p> <p><u>Access roads</u> Here three entities are involved with maintenance and although also the water boards will come into play it is not yet clear how the responsibilities for road maintenance will be divided in the future.</p> <p><u>Fertilizers</u> With rising oil prices one can also expect the prices of this important input to be higher in the future as will the transportation costs of this product. More efficient and cost reducing systems of fertilizer distribution have to be looked into. The fact that an <u>Urea bagging</u> plant is present in the region calls for a look at the cost effectiveness of the import of Urea in bulk, especially because an expansion of the present acreage is anticipated.</p> <p><u>Seed</u> There is a growing demand for quality seed by paddy growers: seed production however is stagnated by the following constraints.</p> <p><u>Acreage</u> For quality seed production a total acreage of approximately 1,000 ha is required to meet future demand. Since four years ADRON has been working on a seed farmers program, inducing small farmers to become seed growers. Up to date seed farmers with together approximately 400 ha have participated. In 2 – 3 seasons time the area is expected to increase to 800 ha. The main obstacle for expansion, however, is the lack of processing facilities (drying, cleaning and bagging) and certification. The possibility to</p>

Stakeholder	Conditions and the gaps of support systems
	<p>mobilize local millers to participate in the processing is now being studied. If this proves not to be feasible other options have to be considered and executed as soon as possible.</p> <p><u>Certification</u> Certification is essential to guarantee the quality of seed. A Seed Act has been ratified by the Government in 2005. The State Resolution that will make this act effective still has to be passed. But, there is another obstacle. International procedures require that an Act on Breeder's Rights has to precede any seed act. Only then the branding of a seed line into a seed variety becomes possible. This implies that the government (in this case it is the responsibility of the Ministry of Agriculture) has to act diligently and take the necessary steps to realize the Act on Breeder's Rights as soon as possible. Modern practice illustrates that execution of certification does not have to be a government activity, but can be handled by private sector entities.</p>
Processors	<p><u>Regulation</u> With an impact on the processing part of the chain includes:</p> <ol style="list-style-type: none"> 1. Raw materials (paddy) As quality standards for wet paddy are no longer applied processors are often forced to buy low grade raw materials. Apart from this there is a lack of research with respect to processing characteristics, that is chemical and physical analysis of the paddy. 2. Existing regulations concerning licenses. This set of rules is no longer up to date. The lack of good regulations and control results in amateurism and does not stimulate sound business practices. Aspects that need attention are: <ul style="list-style-type: none"> • the issue of licenses/continuation of licenses. • the localization of processing units in relation to environmental conditions. • the technical and administrative quality of the management. 3. Extension and information. The processors lack: <ul style="list-style-type: none"> • formal training in post harvest handling and processing. Most processing mills are family-owned enterprises, with the accompanying (traditional) habits of management sharing of the various parts of the production-process and continuity of the business. Owners of mills do not consider formal training a must. Besides there are no formal courses yet to acquire the skills and knowledge needed. • institutionalized extension services. • information on markets and market developments. • information on product development (new products based on rice) and cost-reducing processing methods (energy saving). <p><u>Organization</u> The single organization for processors consists mainly of export millers. However also the non-exporters should be involved in matters as a national rice policy and the required institutional framework.</p> <p><u>Export of rice</u></p> <ul style="list-style-type: none"> • Although a small private-owned wharf in Nickerie is used for exports, the bulk of the rice has to be transported by road to Paramaribo harbour (at cost of USD 500/22 tons). Rehabilitation of the Nickerie harbour with modern facilities (containerhandling etc.) might prove to be cost-reducing if the aspects of time and maintenance of the 240 km road between Paramaribo and Nickerie are taken into consideration. • Promotion and branding. Suriname's rice is a well-known commodity in especially the EU market. However few efforts are made for the promotion and exclusive branding of this rice. The processors and their organization should develop a market oriented strategy.
Consumers	<p><u>Regulation/Control</u> Regulations on food security and safety have to be put in place by the recently established Bureau of Standards. Same goes for quality and eventually packaging.</p>

Stakeholder	Conditions and the gaps of support systems
<p>All stakeholders</p>	<p><u>Government policy</u></p> <p>Government policy towards the industry has been (gently spoken) very erratic and inconsistent during the last say 15 years. The dozen or more reports on the sector focusing on policy measures bear witness to this statement. And although the sector has been "liberalized" in 1992/1993 one would expect that any government aware of the importance and the strong and weak points of the industry would try to find ways and means to create the required conditions for further development of that industry. The lack of awareness results into the following main gaps in government policy:</p> <ul style="list-style-type: none"> • data collection: for recordkeeping and planning purposes correct data (as correct as is practically possible) are essential. Still, every crop ADRON and the Ministry of Agriculture (two government entities) present different data on paddy yields and field productions. • planning and coordination/decision-making: rice is Suriname's main staple food, an important export commodity and provides employment and incomes to many thousand workers and households. However a national rice policy supervised by a decision-making and coordinating body, with <u>serious involvement of the stakeholders</u> is not in sight yet. • Education and training: there is no formal elementary education in agriculture in Suriname. On top of that there is evidence that the number of students in agro-sciences at NATIN and the University of Suriname (institutes for higher education) has been reduced to an almost non existent level. No known actions have been undertaken to reverse this trend and/or to interest students for new fields of agro-science (agro-technology etc.). Training, especially for operators in rice mills is another necessity. In fact, operators must be able to apply HAACP procedures as these are increasingly required by overseas markets.
<p>Farmers and processors</p>	<p><u>Private sector initiative</u></p> <p>The absence of a clear government policy means that no signals are given to the private sector how and when to react on sector-developments. Hence there is a lack of (commercial) private sector initiatives, unless there is a clear cut opportunity for profit making (quite understandable). Moreover, this "no policy" situation results in the industry becoming a realm of amateurism and even piracy (would-be paddy buyers not paying farmers for paddy delivered). In the end the activities of amateurs and pirates do a lot of damage to the sector and even result in undermining the credibility and reputations of those actors who do their best to practice sound business policies.</p> <p>With respect to the non-profit entities: participation and active involvement of the stakeholders are essential to improve their sustainability, especially of the producer organizations. Modern constitutions and market oriented strategies are needed, as is awareness of the advantages of strategic alliances.</p>

8. FINAL REMARKS

Internationally food prices are rising, especially as a result of rising oil prices and the drive towards grain based fuels as a substitute for fossil oil. As Dr. Lester Brown already put it in 1980: "Agricultural based ethanol fuel programs are evolving in a way that threatens to divert food resources to nonfood use and thus to raise food prices". (AVERCIENCIA, Vol. 5/1980)

With the right policy set in place the Suriname rice industry can take advantage of these developments and create a profitable rice sector for many years to come. However, one slogan should be the lead sentence for this new story on the sector: **Get cooperated before you get dissipated.**

ANNEXES

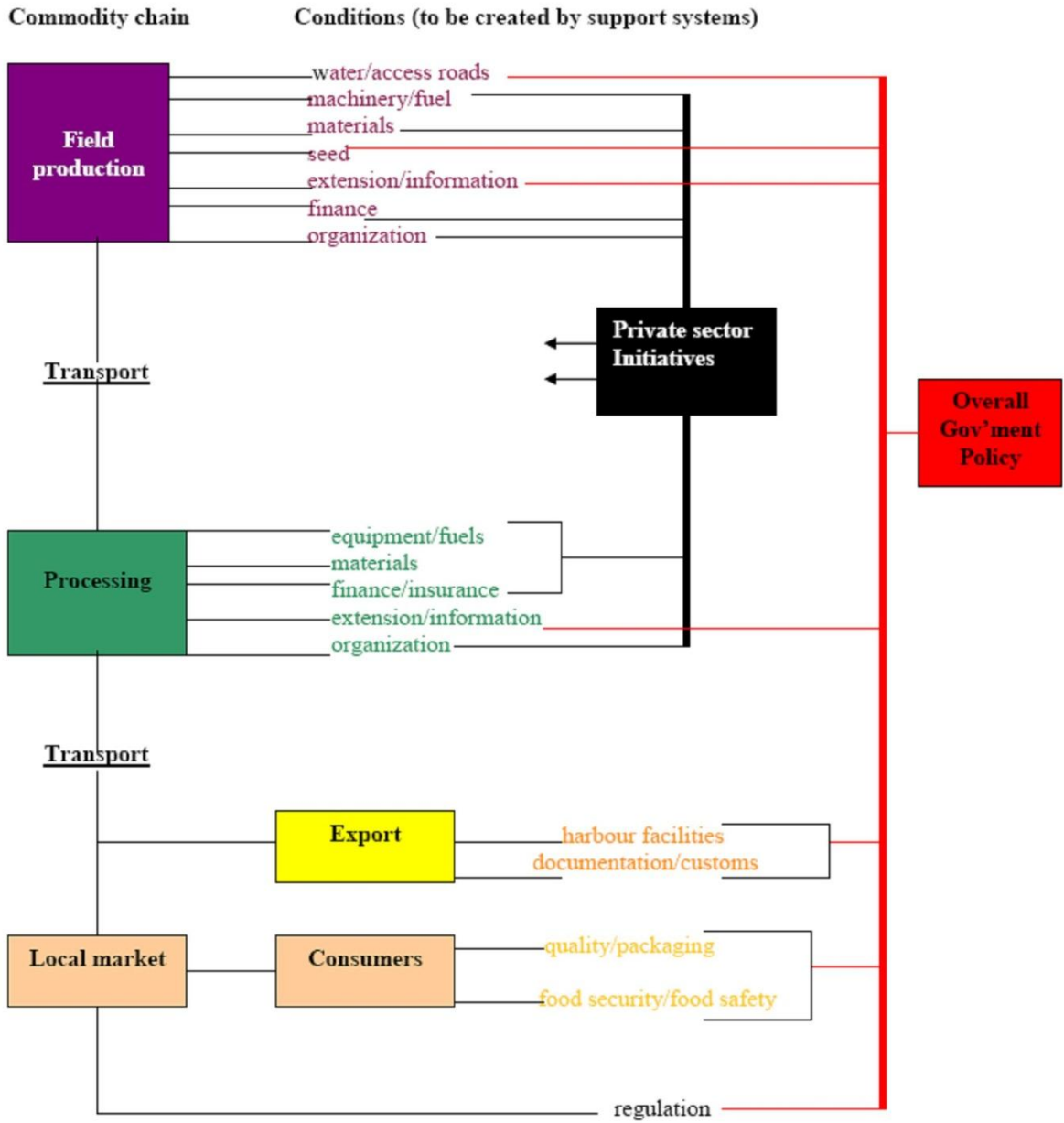
ANNEX 1

Support System To Rice Industry



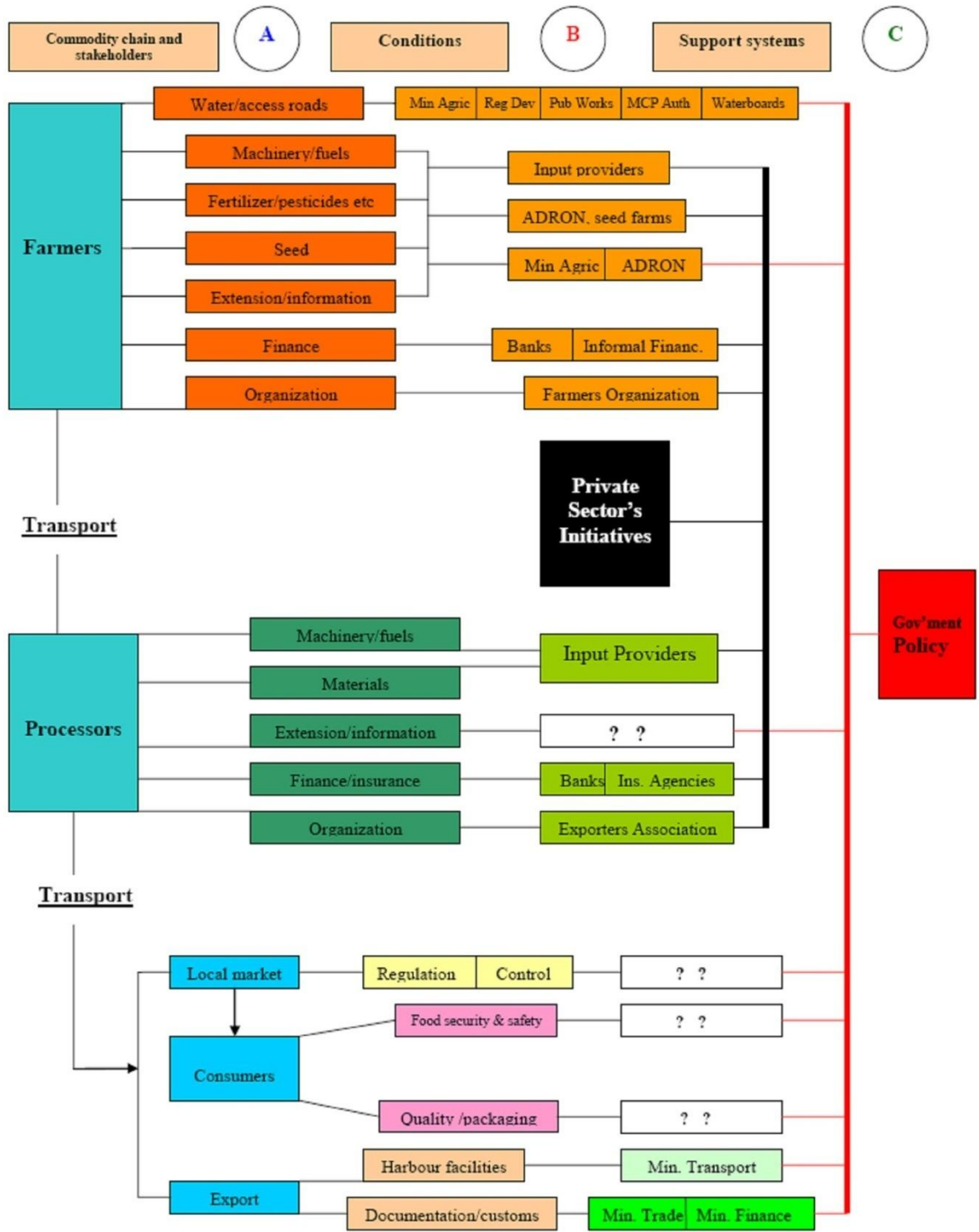
ANNEX 2

Diagram 2 *Commodity chain and conditions for production.*



ANNEX 3

Diagram 3 Commodity chain versus support systems



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