5. Environment Impacts and Mitigation Measures

5.1 Saint Louis

5.1.1 Environmental Impact Assessment
(refer to tabulated sheets)

5.2 Kayar

5.2.1 Environmental Impact Assessment
(refer to tabulated sheets)

Table III.1.9-1 Environmental Impact Assessment - Saint Louis (1/6)

Activity	Potential Impact	Classification	Evaluation	Countermeasures/ Comments
SITE PREPARATION / CONSTRUCTION STAGE				
Site clearing / tree cutting	- Stripping of existing vegetation and some trees	S, D, Lc, A	Impact not significant as there are only some low bushes on the site. Only trees that are in the way of construction will be cut down.	Replanting of trees and other landscaping work after construction completion will be carried out.
Excavation (Cut and Fill)	- Removal of some soil Importing of soil to use as fill	S, D, Lc, A	Impact not significant. According to the soil investigation, the soil type is mainly sand. Soil removed could be used for fill therefore there will not be much unwanted soil that will need to be disposed off site.	Unwanted or suitable excavated soil should be disposed off in proper place.
Demolition	- Demolition of some old existing buildings	S, D, Lc, B, I	The impact will be significant & beneficial as the buildings are old and not maintained in good condition.	New buildings will be built in their place which will have higher function and efficiency.
Relocation	- Existing DOPM, PSPS and CAEP activities will be relocated to another site during the construction	S, D, Lc, A, R	Impact will be significant but temporary only for the duration of the construction.	Temporary offices for DOPM, PSPS and CAEP function must be found before construction starts.
Facilities construction	- Construction activities on site will create noise, dust, and increase construction traffic on road	S, D, Lc, A, R	Impact will be significant but temporary only for the duration of the construction.	Construction activities should be restricted to working hours and constructional plant traffic should be cautioned to travel at low speed especially passing through populated areas.

Legend:
S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible
Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table III.1.9-1 Environmental Impact Assessment - Saint Louis (2/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Temporary services (water, electricity)	- Construction activities will make use of water & electricity supply on the site	S, D, Lc, A	Impact will not be significant and temporary only for the duration of the construction. There is sufficient pipe water & electricity supply to the site and constructional needs will not strain the supply condition.	
Construction labour force	- labour force from outside St. Louis will create demand for housing, services (transport, restaurant, etc.)	S, D, Lc, B & A	Impact will not be significant as most of the labourers are available from St. Louis. The impact will be temporary only for the duration of the construction. The beneficial benefits will be from the injection of cash into the local community from increase in economic activities of the labourers (such as house rental, meals at local restaurants, use of transport). Adverse impact is not expected to be significant as the number of outside workers will be small.	Encourage the contractor to hire local labourers from the community or St. Louis.
Landscaping	- landscaping of the site will seek to improve the scenery and reduce the vision impact of the structures.	L, D, Lc, B, R	Impact will be significant as the existing site is devoid of vegetation except for some scattered trees and low bushes.	Encourage the planting of hardy trees and plants to cope with the harsh environment (dry climate, sandy soil, salt air).
OPERATION / MAINTENANCE STAGE				
Sector 1 - Production / Resource				
Fish resource management & monitoring	- management of the resource will ensure the long term sustainability of the fisheries industry.	L, D, St, B, R	Impact will be significant in the long term as future sustainability will be in doubt if resource management & monitoring is not implemented.	Long term monitoring and accurate data collection is essential for resource management.

Legend:
S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible

Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table III.1.9-1 Environmental Impact Assessment - Saint Louis (3/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Improve security / safety at sea, launching and landing.	- will reduce the loss of lives and fishing boats/gears.	S, D, Lc, B, I	Impact will be significant and effect immediate. The benefit will be substantial due to lives and fishing boat/gear saved.	
Transfer landing activities of purse seine boats to new project site	- will reduce the landing activities and congestion at the existing site at Guet Ndar.	L, D, Lc, B, R	- Impact will be significant & beneficial due to an improvement in sanitation both on the beach and on land at the existing site at Guet Ndar.	- The freeing of the existing space at Guet Ndar could be used for other economic or community activities.
	- concentrated landing causing congestion and waste concentration.	L, D, Lc, A	- Impact not significant as new project site has sufficient space to accommodate the landing of purse seine boats.	- Sanitary control at the new project site to be implemented.
	- longer distance for fisher-men to travel to and from their homes to new project site.	L, D, Lc, A, R	- Impact is significant due to additional 2.5 km travel distance.	- Project will provide multi-purpose truck that may be used by the fishermen free of charge.
Fish cleaning, sorting, packing activities	- Pollution of ground water and environment from fish waste and discharge from activities	L, D, Lc, A, R	Impact will be significant if the waste discharge is not properly handled and treated.	Project design will incorportate waste separation and proper discharge of waste water.
Preparation activities on land for fishing	- Contamination of the environment from fuel supply activities	L, D, Lc, A, R	Impact will be significant if the fuel supply yard is not designed to handle fuel spillage.	Project design will incorportate fuel trap and separaters to minimise spillage discharge.
Repair / maintenance activities	- Waste from net, boat, gear repairs. - Contamination of environment from waste oil / fuel discharge from repair activities.	L, D, Lc, A, R	Impact will be significant if the waste disposal is not managed and appropriate facilities to handle the waste discharge.	Waste disposal management, control, and facilities will be implemented in the project.

Legend:
S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible

Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table III.1.9-1 Environmental Impact Assessment - Saint Louis (4/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Boat building activities	- Waste from boat building activities could contaminate the boat building yard.	L, D, Lc, A, R	Impact will be significant if the waste disposal is not managed to handle the waste material.	Waste disposal management & control will be implemented in the project.
Fishing modernization activities	- Modern fishing gear and techniques will impact on the fishermen's income and way of fishing. - Impact on fishing activities could be on more efficient and cost effective fishing which in turn will impact on fisheries resources.	L, D, S, B, R	Impact will be significant and will be strategic as the modern fishing technique and gear will be promoted not only in St.Louis area but also throughout the nation. Impact on fisheries resources will be significant if fishing activities are not done in line with resource management & monitoring activities.	Equity of access to participate in these activities must be assured by user groups. Resource management & monitoring must be implemented in line with fishing modernization.
Fish Collection Depot activities	- Fish collection of high value fish at the depot will impact on the efficient collection / handling leading to time savings and quality improvement. - Ice supply to fishermen will impact on improved fish quality.	L, D, Lc, B, R	Impact will be significant if the use of the depot is popular.	Use of the depot should be encouraged to get the most benefits from it. Regulatory mechanism may assist in promoting the use of the depot.
Privatised activities - repair workshops - fuel supply - rubbish collection - cleaning services	- The privatised activities will encourage competition, greater opportunities and spin-off activities.	L, D, Lc, B	Impact will not be significant as there are existing privatised activities at the site.	Project will encourage these privatised activities to promote sustainable and equitable services.

Legend:
S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact R = Reversible I = Irreversible
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact
Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table III.1.9-1 Environmental Impact Assessment - Saint Louis (5/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Sector 2 - Marketing / Distribution				
Fish market activities - fish sorting - cleaning / washing	- These activities will increase waste water generated.	L, D, Lc, A, R	Impact will be signifant as these activities will be concentrated within the complex.	Project will provide adequate water supply and waste handling/ disposal facilities.
- buying / selling - distribution / traffic	- These activities will mean an increased people and vehicle movement, impacting on noise and exhaust emission.	L, D, Lc, A, R	Impact will be significant within the complex due to the concentration of people and traffic to conduct these activities. Impact of exhaust emission is not expected to be significant due to the open nature of the complex design and no inhabitants living within the complex.	Project design will cater to the volume of people and traffic. Adequate truck berth & parking will be provided to handle the vehicle traffic.
Ice plant / cold storage - Water consumption	- These operation impact on the water supply and generate waste water.	L, D, Lc, A,	Impact will not be significant as the existing water supply in St. Louis is more than adequate to meet the new water demand of the complex.	Waste water generated will be adequately handled by the project's waste handling/ disposal facilities.
- Ice supply and storage	- These will impact on increased fish quality and maintaining freshness.	L, D, St, B, R	Impact will be significant as existing ice supply cannot meet local demand and storage facilities are not adequate.	Equity of access to be ensured by user group and autonomous body.
Fuel supply activities	- Impact from accidental fuel spillage leading to contamination of soil and ground water.	S, D, Lc, A, R	Impact will be significant as existing site does not have fuel supply activities and is not contaminated.	Project will provide adequate fuel handling/ disposal facilities to cope with any accidental spillage.
	- Possible fire hazard.		Impact will be significant as damage from fire will be drastic and may affect the whole operation of the complex.	Fuel depot will be located away from complex to minimise fire hazard. Project will incorporate fire safety & fighting equipment.

Legend:
S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible
Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table III.1.9-1 Environmental Impact Assessment - Saint Louis (6/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Sector 3 - Artisanal Processing				
Quality improvement / inspection / control activities	- Product quality and sanitation will be controlled and improved impacting on the health of the consumers.	L, D, St, B, R	Impact will be significant and health impact on consumers will not only be local but strategic as the products are exported to neighbouring countries.	Equity of access to be assured by the autonomous body.
Sector 4 - Community Development				
Improve literacy & health/sanitary awareness	- Knowledge empowerment will impact on behavioural changes that may lead to improved quality of life.	L, I, St, B, R	Impact will be indirect and significant for the improvement of the life of the community.	Equity of access to be assured by the user group.
Community infrastructure / facilities improvement	- These will provide the community with better services to improve their quality of life.	L, I, St, B, R	Impact will be indirect and significant for the improvement of the life of the community.	Equity of access to be assured by the user group.
Sector 5 - Education / Training				
Training of fishermen & processors - fishing techniques, safety, resource management - out of school education - processing techniques - quality & sanitation	- Knowledge empowerment will impact on behavioural changes that may lead to improved quality of life.	L, I, St, B, R	Impact will be indirect and significant for the improvement of the life of the beneficiaries and community	Equity of access to be assured by the user group.
Training of DOPM, CRODT, CAEP, PSPS - -	- Training will improve the knowledge and facilitate sustainable fisheries activities and of the complex operation.	L, D, St, B, R	Impact will be significant as training of the upper level beneficiaries will be necessary for the continued operation of the complex.	Equity of access to be assured by the autonomous body.

Legend:
S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible
Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table III.2.9-1 Environmental Impact Assessment - Kayar (1/6)

Activity	Potential Impact	Classification	Evaluation	Countermeasures/ Comments
SITE PREPARATION / CONSTRUCTION STAGE				
Site clearing / tree cutting	- Stripping of existing vegetation and some trees	S, D, Lc, A	Impact not significant as there are hardly any vegetative cover on the site. Only trees that are in the way of construction will be cut down.	Replanting of trees and other landscaping work after construction completion will be carried out.
Excavation (Cut and Fill)	- Removal of some soil Importing of soil to use as fill	S, D, Lc, A	Impact not significant. According to the soil investigation, the soil type is mainly sand. Soil removed could be used for fill therefore there will not be much unwanted soil that will need to be disposed off site.	Unwanted or suitable excavated soil should be disposed off in proper place.
Demolition	- Demolition of some existing buildings	S, D, Lc, B, I	The impact will be significant & beneficial as the buildings are old and not maintained in good condition.	New buildings will be built in their place which will have higher function and efficiency.
Relocation	- Existing local retail market, DOPM, PSPS and CAEP activities will be relocated to another site during the construction	S, D, Lc, A, R	Impact will be significant but temporary only for the duration of the construction.	Temporary offices for DOPM, PSPS and CAEP function must be found before construction starts.
Facilities construction	- Construction activities on site will create noise, dust, and increase construction traffic on road	S, D, Lc, A, R	Impact will be significant but temporary only for the duration of the construction.	Construction activities should be restricted to working hours and constructional plant traffic should be cautioned to travel at low speed especially passing through populated areas.

Legend:
S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible

Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table III.2.9-1 Environmental Impact Assessment - Kayar (2/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Temporary services (water, electricity)	- Construction activities will make use of water & electricity supply on the site	S, D, Lc, A	Impact will not be significant and temporary only for the duration of the construction. There is sufficient well water & electricity supply to the site and constructional needs will not strain the supply condition.	
Construction labour force	- labour force from outside Kayar will create demand for housing, services (transport, restaurant, etc.)	S, D, Lc, B & A	Impact will not be significant as most of the labourers may be available from Kayar. The impact will be temporary only for the duration of the construction. The beneficial benefits will be from the injection of cash into the local community from increase in economic activities of the labourers (such as house rental, meals at local restaurants, use of transport). Adverse impact is not expected to be significant as the number of outside workers will be small.	Encourage the contractor to hire local labourers from the community.
Landscaping	- landscaping of the site will seek to improve the scenery and reduce the vision impact of the structures.	L, D, Lc, B, R	Impact will be significant as the existing site is devoid of vegetation except for some scattered trees along the coast.	Encourage the planting of hardy trees and plants to cope with the harsh environment (dry climate, sandy soil, salt air).
OPERATION / MAINTENANCE STAGE				
Sector 1 - Production / Resource				
Fish resource management & monitoring	- management of the resource will ensure the long term sustainability of the fisheries industry.	L, D, St, B, R	Impact will be significant in the long term as future sustainability will be in doubt if resource management & monitoring is not implemented.	Long term monitoring and accurate data collection is essential for resource management.

Legend:
S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible
Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table III.2.9-1 Environmental Impact Assessment - Kayar (3/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Improve security / safety at sea, launching and landing.	- will reduce the loss of lives and fishing boats/gears.	S, D, Lc, B, I	Impact will be significant and effect immediate. The benefit will be substantial due to lives and fishing boat/gear saved.	
Transfer landing activities of boats to new project site	- concentrated landing causing congestion and waste concentration.	L, D, Lc, A	- Impact not significant as existing landings are already concentrated in this area.	- Sanitary control at the new project site to be implemented.
Fish cleaning, sorting, packing activities	- Pollution of ground water and environment from fish waste and discharge from activities	L, D, Lc, A, R	Impact will be significant if the waste discharge is not properly handled and treated.	Project design will incorportate waste separation and proper discharge of waste water.
Preparation activities on land for fishing	- Contamination of the environment from fuel supply activities	L, D, Lc, A, R	Impact will be significant if the fuel supply yard is not designed to handle fuel spillage.	Project design will incorportate fuel trap and separaters to minimise spillage discharge.
Repair / maintenance activities	- Waste from net, boat, gear repairs. - Contamination of environment from waste oil / fuel discharge from repair activities.	L, D, Lc, A, R	Impact will be significant if the waste disposal is not managed and appropriate facilities to handle the waste discharge.	Waste disposal management, control, and facilities will be implemented in the project.
Boat building activities	- Waste from boat building activities could contaminate the boat building yard.	L, D, Lc, A, R	Impact will be significant if the waste disposal is not managed to handle the waste material.	Waste disposal management & control will be implemented in the project.
Fishing modernization activities	- Modern fishing gear and techniques will impact on the fishermen's income and way of fishing.	L, D, S, B, R	Impact will be significant and will be strategic as the modern fishing technique and gear will be promoted not only in Kayar area but also throughout the nation.	Equity of access to participate in these activities must be assured by user groups.

Legend:
S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible
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Table III.2.9-1 Environmental Impact Assessment - Kayar (4/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Fishing modernization activities	- Impact on fishing activities could be on more efficient and cost effective fishing which in turn will impact on fisheries resources.	L, D, S, B, R	Impact on fisheries resources will be significant if fishing activities are not done in line with resource management & monitoring activities.	Resource management & monitoring must be implemented in line with fishing modernization.
Privatised activities - repair workshops - fuel supply - rubbish collection - cleaning services	- The privatised activities will encourage competition, greater opportunities and spin-off activities.	L, D, Lc, B	Impact will not be significant as there are existing privatised activities at the site.	Project will encourage these privatised activities to promote sustainable and equitable services.
Sector 2 - Marketing / Distribution				
Fish market activities - fish sorting - cleaning / washing	- These activities will increase waste water generated.	L, D, Lc, A, R	Impact will be signifant as these activities will be concentrated within the complex.	Project will provide adequate water supply and waste handling/ disposal facilities.
- buying / selling - distribution / traffic	- These activities will mean an increased people and vehicle movement, impacting on noise and exhaust emission.	L, D, Lc, A, R	Impact will be significant within the complex due to the concentration of people and traffic to conduct these activities. Impact of exhaust emission is not expected to be significant due to the open nature of the complex design and no inhabitants living within the complex.	Project design will cater to the volume of people and traffic. Adequate truck berth & parking will be provided to handle the vehicle traffic.
Ice plant / cold storage - Water consumption	- These operation impact on the water supply and generate waste water.	L, D, Lc, A, R	Impact on water source will be significant as the existing ground water supply in Kayar is already showing salt intrusion.	Ground water from a source 3.5 km away will be proposed as water supply source for project. Waste water generated will be adequately handled by the project's waste handling/ disposal facilities.

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S = Short Term impact L = Long Term impact D = Direct impact I = Indirect impact
Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible

Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts

Table III.2.9-1 Environmental Impact Assessment - Kayar (5/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Ice plant / cold storage - Ice supply and storage	- These will impact on increased fish quality and maintaining freshness.	L, D, St, B, R	Impact will be significant as existing ice supply cannot meet local demand and storage facilities are not adequate.	Equity of access to be ensured by user group and autonomous body.
Fuel supply activities	- Impact from accidental fuel spillage leading to contamination of soil and ground water.	S, D, Lc, A, R	Impact will be significant as existing site does not have fuel supply activities and is not contaminated.	Project will provide adequate fuel handling/ disposal facilities to cope with any accidental spillage.
	- Possible fire hazard.		Impact will be significant as damage from fire will be drastic and may affect the whole operation of the complex.	Fuel depot will be located away from complex to minimise fire hazard. Project will incorporate fire safety & fighting equipment.
Sector 3 - Artisanal Processing				
Improve sanitation and working environment of existing processing areas	- Improved sanitation of working environment, impacting on health of processors, reduction of health risk / epidemic, and improving quality / hygiene of products.	L, D, Lc, St, B, R	Impact will be significant and health impact will not only be local (i.e.the local processors) but also strategic (i.e. the consumers of the exported products).	Equity of access to be assured by the user group and autonomous body.
Quality improvement / inspection / control activities	- Product quality and sanitation will be controlled and improved impacting on the health of the consumers.	L, D, St, B, R	Impact will be significant and health impact on consumers will not only be local but strategic as the products are exported to neighbouring countries.	Equity of access to be assured by the autonomous body.
Sector 4 - Community Development				
Improve literacy & health/sanitary awareness	- Knowledge empowerment will impact on behavioural changes that may lead to improved quality of life.	L, I, St, B, R	Impact will be indirect and significant for the improvement of the life of the community.	Equity of access to be assured by the user group.

Legend:
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Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible
Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

Table III.2.9-1 Environmental Impact Assessment - Kayar (6/6)

Activity	Potential Impacts	Classification	Evaluation	Countermeasures/ Comments
Community infrastructure / facilities improvement	- These will provide the community with better services to improve their quality of life.	L, I, St, B, R	Impact will be indirect and significant for the improvement of the life of the community.	Equity of access to be assured by the user group.
Sector 5 - Education / Training				
Training of fishermen & processors - fishing techniques, safety, resource management - out of school education - processing techniques - quality & sanitation	- Knowledge empowerment will impact on behavioural changes that may lead to improved quality of life.	L, I, St, B, R	Impact will be indirect and significant for the improvement of the life of the beneficiaries and community	Equity of access to be assured by the user group.
Training of DOPM, CRODT, CAEP, PSPS - -	- Training will improve the knowledge and facilitate sustainable fisheries activities and of the complex operation.	L, D, St, B, R	Impact will be significant as training of the upper level beneficiaries will be necessary for the continued operation of the complex.	Equity of access to be assured by the autonomous body.

Legend:
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Lc = Local impact St = Strategic impact A = Adverse impact B = Beneficial impact R = Reversible I = Irreversible

Note on Classification:
Impact that is Significant, will be further classified into Reversible or Irreversible impacts.

6. Major Impacts and Mitigation Measures

Major Impact Activity	By	Affected / Beneficiary	Duration of Impact	Mitigation / Alternative
Demolition Of Existing Structures	Senegalese Government	- DOPM - CAEP - PSPS	Construction period	Temporary relocation to other buildings
Relocation Of The Retail Market (Kayar)	Senegalese Government	- retailers - consumers - DOPM	Construction period	Demolition of DOPM's office should precede construction activities
Construction activities	Contractor	- Inhabitants - Users of site	Construction period	Proper management and control
Tree planting / landscaping	Contractor	- Inhabitants - Users of site	Long term	Activity to be encouraged / sustained.
Fish resource management & monitoring	- DOPM - CRODT - Fishermen	- Fishermen - Consumers - Nation	Long term	Activity to be encouraged / sustained.
Safety / security at sea	- DOPM - Fishermen	- Fishermen	Immediate	Activity to be encouraged / sustained.
Transfer landing activities to new complex	- DOPM	- Wholesalers - Fishermen - Processors - Micro-whole salers - Processors - Transporters	Long term	Management of complex to ensure sanitary standard, maintain transport vehicle, equitable access for users, proper & efficient operation of complex.
Waste discharge from: - Fish cleaning, packing, sorting - Fisheries preparation activities - Fisheries repair / maintenance activities - Boat building	- Fishermen - Wholesalers - Micro-whole salers - Mechanics - Ship builders	- Users of site - inhabitants	Long term	Project's sanitary facilities to be properly maintained by complex management body.
Fisheries modernization	- DOPM	- Fishermen	Long term	- Activity to be encouraged / sustained. - Fish resource to be monitored
Fish collection depot (Saint Louis)	- Autonomous body - User group	- Fishermen - Wholesalers - Micro-whole salers - Processors - Transporters	Long term	- Activity to be encouraged / sustained. - Proper management and control, equitable access for users

Major Impact Activity	By	Affected / Beneficiary	Duration of Impact	Mitigation / Alternative
Privatised activities in complex	- Autonomous body - User group	- Ice sellers - Fuel suppliers - Mechanics - Boat builders - Rubbish / waste disposers	Long term	- Activity to be encouraged / sustained. - Proper management and control, equitable access for users & service providers
Fish marketing / transport in complex	- Autonomous body - User group	- Wholesalers - Micro-whole salers - Processors - Transporters - Fishermen - Consumers	Long term	- Activity to be encouraged / sustained. - Proper management and control, equitable access for users & service providers - Management of complex to ensure sanitary standard, proper & efficient operation of complex.
Improve processing	User group	- Processors - Consumers	Long term	- Activity to be encouraged / sustained. - Proper management and control, equitable access for users
Training	- DOPM - Autonomous body - User group	- Wholesalers - Micro-whole salers - Processors - Transporters - Fishermen - Users	Long term	- Activity to be encouraged / sustained. - Proper management and control, equitable access for users
Improve literacy, health sanitary awareness	- Community - Autonomous body	- Community - Users	Long term	- Activity to be encouraged / sustained.

7. Management and Monitoring Guidelines

7.1 Rubbish Collection System

The rubbish collection system for Saint Louis will basically be extension of the existing municipality rubbish collection system. Under the project, rubbish bins will be provided. As for Kayar, the rubbish collection services could be an extension of the existing community rubbish collection service.

The money collected by the autonomous body for the rubbish collection service could be used to fund various campaigns (sanitary and health awareness, cleaning, rubbish reduction, composting, etc.) and to maintain the rubbish collection services facilities and equipment. Maintenance of the dumping ground for Kayar must be initiated to control unlawful dumping, control of vectors, fire hazards and separation of bio-degradable rubbish for subsequent composting.

7.2 Water Supply System

Potable water for Saint Louis is from the pipe water supplied by the municipality and is of good quality. For long term sustainability of the water supply for Kayar, it is recommended that water be extracted from a source 3.5 km away to avoid salt intrusion into the water source.

Maintenance of the complex water supply network to check for water leaks, deterioration of piping, pumps, water tanks / tower condition must be undertaken periodically by the autonomous body.

7.3 Toilet / Sewage Disposal

Both Saint Louis and Kayar will have independent septic tank that will require periodic checks on system and to order pumping out of septic tank by vacuum pump car when it becomes full. Autonomous body to maintain the sewage system from funds collected from water charge and to encourage community participation in & responsibility for cleaning up the common areas. Awareness campaign on use and maintenance of modern toilets, sanitation problem and related health issues of unhygienic conditions to be undertaken.

7.4 General Facilities and Site Cleanliness

Autonomous body to maintain cleanliness of the facilities and to run cleanliness awareness campaign to increase awareness of users and community. Upkeep of site's landscaping trees / vegetative cover, and maintenance of site's drainage by getting rid of sand or rubbish that may be accumulated or blown on to the site, must also be done by the autonomous body.

7.5 Monitoring of Mitigation Measures and Impact

Monitoring should be undertaken during the whole project cycle from application to implement the project, construction, through to operation and maintenance. This should be done at various levels to ensure that:

- ensure legal standards are not exceeded
- check that mitigation measures proposed are implemented
- provide early warning of unforeseen environmental damage
- checking accuracy of impact predictions

8. Conclusion

8.1 Saint Louis

The project's environmental adverse impact during the construction phase will be minimised if the contractor hire the available local labourers from Saint Louis and exercise proper construction activity control and management.

The impacts during the operation and maintenance stage are mainly favourable but equitable access for the target beneficiaries must be ensured by the user group or autonomous body that is in charged of the management of the facilities.

Adverse impact will be minimised by the incorporating in the project design, adequate waste disposal / management facilities and equipment, together with the proper training for sustainable operation and maintenance of these facilities.

Social benefits from the project in terms of increased awareness, knowledge and social services will contribute towards an improved quality of life to meet the basic human needs of the fishing community.

8.2 Kayar

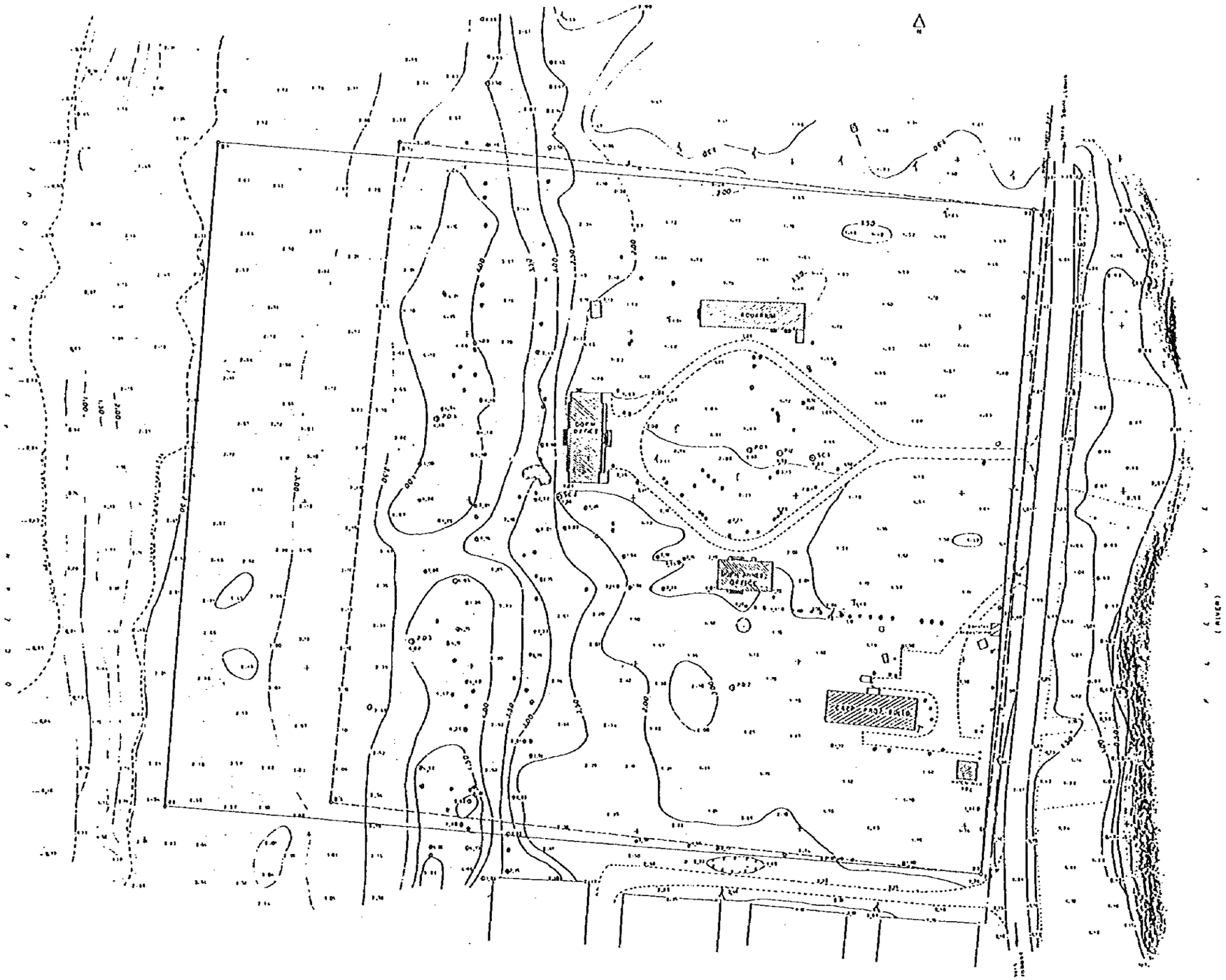
The project's environmental adverse impact during the construction phase will be minimised if the contractor hire the available local labourers from Kayar and exercise proper construction activity control and management.

The impacts during the operation and maintenance stage are mainly favourable but equitable access for the target beneficiaries must be ensured by the user group or autonomous body that is in charged of the management of the facilities.

Adverse impact will be minimised by the incorporating in the project design, adequate waste disposal / management facilities and equipment, together with the proper training for sustainable operation and maintenance of these facilities.

Community consensus on the relocation of the local retail market and some fishermen houses will have beneficial impact with the new retail market facilities and legal housing plots for the relocated fishermen.

Social benefits from the project in terms of increased awareness, knowledge and social services will contribute towards an improved quality of live to need the basic human needs of the fishing community.



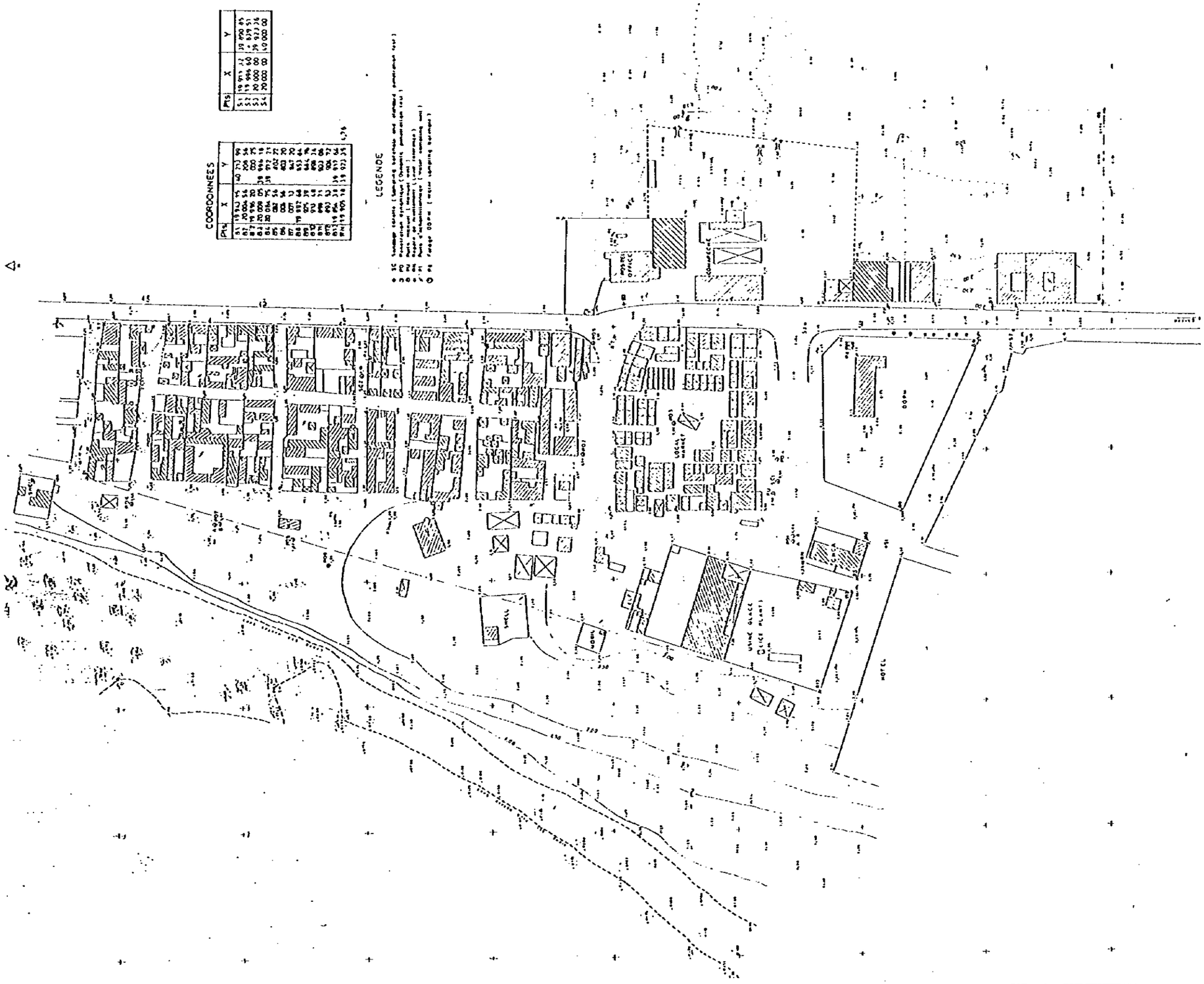
LEGENDE

SC Sondage carotté (Sampling borehole and standard penetration test)
PD Pénétration dynamique (Dynamic penetration test)
PU Puits manuel (Manual well)
RN Repère de nivellement (Level reference)

COORDONNEES		
N°PTS	X	Y
B1	77 874.98	70 908.46
B2	78 073.68	70 885.97
B3	78 055.76	70 686.04
B4	77 856.45	70 709.33
SF 924		
B1	77 880.48	70 908.42
B2	78 079.08	70 884.83
B3	78 055.14	70 686.04
B4	77 856.88	70 709.84
RN	78 002.81	70 878.44

TOPOGRAPHIC SURVEY - SAINT LOUIS

THE STUDY ON THE DEVELOPMENT PROGRAM
FOR NORTHERN FISHING AREAS
IN THE REPUBLIC OF SENEGAL
JAPAN INTERNATIONAL COOPERATION AGENCY



TOPOGRAPHIC SURVEY - KAYAR

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Appendix 3-1

DETAILED SURVEY
ON
FISHING COMMUNITY DEVELOPMENT
IN
SAINT LOUIS

CONTENTS

1 Presentation of the study

1 - 1 Objective and problematic of the study

This study is aimed to complete the one realized by the Japanese mission in the field of the first phase study on the Development of Fishing Communities of Guet Ndar and Kayar. This survey consists of doing field survey from detailed questionnaires on the social and economical situation of the fishing actors in Guet Ndar.

The result of this questionnaire would permit to know the specific working conditions of residents fishing communities in Guet Ndar and their relationships with the migrants.

The data that permitted to produce this present report have been collected from interviews led on a representative sample of the fishing community essentially resident in Guet Ndar and on another hand from informal discussions with some resource persons.

1 - 2 Methodology

It consisted first on elaborating the questionnaires and do a test in Kayar with a sample of 20 persons representing residents and migrants: fishermen, processors and micro wholesalers.

The exploitation of data permitted the elaboration of a final document for the survey. This first phase was done during the period between May 20th and 27th 1997. The second phase began from May 28th 1997 by a trip in St. Louis.

After formal discussions with the regional fishery office in St. Louis. The days of May 30th and 31st 1997 was spent for the training of interviewers (03), the choice of the sample (150 persons) and the identification of target.

Composition of the sample

Fishermen	: 75
Processors	: 45
Wholesalers	: 23 (with 16 micro wholesalers)
Carpenters	: 03
Mechanics	: 02
Gasoline sellers	: 02
Total	150

Along with these targets, some informal investigations have been led with the local organizations and partners of the activity :

Local organizations

- Federation of Fishermen GIEs
- Federation of Wholesalers GIEs
- Regional Federation of Fishermen
- Union of the Operators of Artisanal Fishing

Partners of the activity

- National Bank for Agricultural Credit (CNCAS)
- Regional Service of Statistics
- Regional Fishery Service
- Regional Service of Community Development
- Preservation and Production of Ice Units

2 Presentation of the Study Zone

2-1 History Structure and Social organization

2-1-1 History of the village

The history of the Langue de Barbarie (Guet Ndar and Gokhou Mbathie) is closely linked to the history of St. Louis which was the capital city of Senegal and Mauritania during colonialism. They constitute one of the ancient districts of St. Louis which succeeded to reserve their originality despite the multiple changes occurred in St. Louis among which the transfer of the capital city to Dakar in 1959. This demarcation of Guet Ndar within the city of St. Louis is as strong as the river's hand is separating culturally l'Ile in its southern part from the rest and constitute thus a stopper for the two cultures.

In one hand, l'Ile modern colonial type like European towns where are concentrated administration, commerce and the intelligentsia.

In the other hand, Guet Ndar with a traditional occupation rate extremely high, bad sandy roads and bad living and sanitary conditions. But the Santhiaba market on the Langue de Barbarie permits a certain mixture of the different communities.

Nevertheless, despite this exterior influence, Guet Ndar kept
its traditional status characterizing the fishing villages of the North and South Coasts of Senegal generally inhabited by Lebou communities.

Apart from these socio-professional differences, St. Louisian either from Guet-Ndar or from l'Ile are very happy to belong to that community.

*L ÎLE is a district surrounded by water and limited in the East by the Senegal river and in the West by one of the affluent of this same river.

2-1-2 Structure and social organization

The existence of many forms of socio-professional and cultural organizations illustrates very well the strong hierachisation of these fishing communities.

a) The informal discussions permitted us to have information on the existence and role of the identified local organizations :

- Federation of Fishermen's GIEs

Created in 1987, it is a federation of 500 GIEs with 250 registered at CNCAS. From 1989 to 1990 they received a credit for equipment (600 millions Fcfa with 120 millions for the repatriated (Mauritanian migrants).

On this funding, there is a contribution of 302 millions from Pro-peche in the form of guarantee up to 70%. Pro-peche is a Canadian project for the support to the fishery sector.

The reimbursement situations of this credit as in April 1997 is :

- Own funds : 84.4%
- Pro-peche : 75%
- Repatriates : 1.5%

We should also observe that the funds allocated to the repatriated was the sources of many problems. They thought that this aid was a non reimbursable grant aid that the government allocated to them because of the damages to which they were victims.

Also a Mutual of Credit and Savings has been set up by this federation and will start its activities soon.

-Federation of Wholesalers GIEs
It was created in 1984 with 54 GIEs and 313 members and a capital of 200,000F Fcfa in CNCAS bank. Its objective is to facilitate the access to credit for all members. They declare that the conditions for the access to credit in CNCAS are very difficult, they ask for a personal contribution of 20% and an interest rate of about 17%.

- Regional Federation of Fishermen Collective
Created in 1989 it has 1000 members according to its responsibilities. One of its objective is to fill the gap of the cooperatives that are no longer functioning.

Among the actions realized we can list the twinning of the towns St. Louis and Boulogne. For that purpose they benefit from:

- Two containers of fishing equipment from European fishermen
- One container of health equipment for the hospital of St. Louis form the hospital of Boulogne

This organization plays the role of intermediary between the state and the fishing actors. It also intervene in the protection of the environment by organizing periodical actions to clean the beach. Its priorities are:

- The Purchase of transportation equipment to facilitate the distribution of fishing products.
- The construction of ice storage to preserve the products in peak season in order to maintain the prices at a satisfactory level.
- The construction of the headquarters from funds of the members participation and the support of its partners.
- Undertake actions towards the state to obtain tax exemption for fishing materials.

- Credit and saving Mutual for the Fishermen's GIEs
Its establishment is very recent and is the evidence of the positive evolution of the local economy. Created by the Federation of fishermen's GIEs , its activities covers all the fishing sectors. As a local bank its role will be to organize the local credit and give long term and short term credit to its members in very interesting conditions.

During our visit, we observe the existence of the rooms standing for offices and the equipment. Management tools were available, the training of the responsibilities in charge of management was already done and a social capital of 2,000,000 Fcfa available. The initiators are waiting to obtain the approval of the Ministry of Finance to start the institution.

- Union of the Operators of artisanal fishery
It belongs to the UOPAGC created in February 1996. It has 6 management committees coordinating the activities of 112 GIEs with about 7,350 members. The 6 sites concerned are :

- Hann
- Pikine / Guediawaye
- Kayar
- Lompoul
- Fass Boye
- Saint Louis

<u>Objective and goals of the Union</u>

- the economical and social promotion of its members
- the development of training and information of its members
- the implementation of all the means liable to facilitate the economical collective and individual activities of its members in order to increase its results.
- the acquisition of material and financial means necessary for its members
- the promotion and marketing of its products within and outside the country.

Organization

There are 30 delegates in the board of the Union and 6 members form the executive committee. There are 4 Commissions divided into the various intervention fields of the Union:

- the Marketing Commission

In Charge of the marketing and finding of the potential clients in and outside the country

- the Information and Training Commission

It contributes to increase the level of information, education and women's knowledge in production, marketing and management techniques.

- Exterior Relations commissions

In charge of contacting potential partners to favor the exchanges with other structures, to create, develop and organize funding mechanisms accessible and adapted to women's needs

- Organization Commission

In charge of the organization of meetings, seminars and all other forms of potential organization capable to strengthen the Union's property .

Activities of the Union

- Marketing of sea products (fresh or processed)
- Saving and credit for equipment and operational fund
- Training
- Development of social activities
- Improvement of the living and working conditions of its members

Means

A various professional team consisted of development agents, facilitators, resource persons, GIEs leaders and heads of enterprises

Results

- Training of 110 auditors
- Funding of the members (revolving credit) for an amount of 530,000Fcfa
- Rehabilitation project of the training centers Mame Diarra BOUSSO in St Louis
- Project for the installment of private telephone centers

Problems

The sites are not well equipped (Small hall, no evacuation and draining systems for garages, lack of management of the space between the different enterprises)

Marketing

- The access to fresh fish is not always easy because of the lack of financial means
- The women do not master the marketing and exportation ways
- Transportation is very expensive.

Besides, the Union benefits from the Institutional support of the Canadian Corporation (BACC). Up to now, the Union is functioning by its own means.(participation of the members : for example . membership fees of 10,000Fcfa per site per month representing 60,000F per month)

Now the Union has at its disposal a fund of 1,000,000 Fcfa to carry its activities (for example: revolving credit funded to its members for 2 months with an interest rate of 10% .25% of this amount is discounted to the management Committee for motivation.

It is important to observe that the Canadian support will end on February 1998, the reason why the search for partners for the different fields (training an funding) constitutes a priority for the Union.

2-1-3 Formal and informal leaders

In a society so attached to tradition as Guet Ndarian society, leaders either formal or informal play a very important role. That is the case of the Presidents and General secretaries of socio-professional organizations such as federation of fishermen's GIEs, wholesalers' GIEs, the collective of fishermen and local authorities (notables) of the districts.

This statement is confirmed by our survey : 73.3 % of people interviewed declare that they trust their local authorities against 19.3% contrary opinions.

2-1-4 Associative Movements in the zone

The results of the study revealed an obvious interest of populations to join associations The reason why there is a diversity of these associations even if the most popular are those related to economy or socio-professional as stated before.

a) Associations

63.3 % of the persons interviewed do not belong to associations against 36.7 % who joined organizations. These structures are playing an important role in the social organization of Guet Ndar. All the decisions concerning the community are taken within these organizations. They have different forms

- Socio professional: Like the Federation of the Fishermen's Collective grouping 16.7% of interviewed persons, it plays an important role.
- Social: The Same Age Persons (16.7%) is caring of the social harmony of the community. They are solving the conflicts in the neighborhood. For this specific case of the Same Age Persons named Sector, this group favors the gathering of same age people around a belote table or tea party in order to have an eye on solidarity, understanding and within the district
- Sportive: They are Cultural and Sportive Associations like Sport Linguere in which 12.0 % of the interviewed are members; Guedj Gui (the sea) with 1.3 %. Lampe Fall (3.3%) and JA Guet Ndar (1.3%). These associations are in charge of the animation during the school holidays or Navetanes They are investing on the defense of the environment by implementing cleaning actions for a better sanitary condition of the district.
- Dahiras: It plays an important role in the religious organization of the believers. According to the survey 66.7 % of the interviewed do not belong to them, 30% are members, and 3.3% did not give their opinion. Among the persons interviewed 12.0 % are members of the Dahira Khadryia 6.0 % are Mourides, 2.3 % are Talibe Layene and 1.3 % are Tidjanes . The informal interviews led with some persons show that 80% of young people are Mourids, whereas 80% of adults and old persons are in majority Tidjanes.

2-2 Demographic characteristics

It's a young population with a high birth rate in the age bracket of less than 20 years representing more than 50 % of the total population which is 35,851 inhabitants (1996) with 16,632 men and 18,119 women. Guet Ndar population represents 24.15 % of the total populations of St. Louis commune which is 148,413 inhabitants.

The Distribution by age is as followed:

Age group	%
0 to 4 years	: 19.4%
5 to 9 years	: 18.5%
10 to 14 years	: 12.8%
15 to 19 years	: 9.9%
20 to 24 years	: 7.6%
25 to 29 years	: 6.5%
30 to 34 years	: 5.7%
35 to 44 years	: 3.5%
45 to 49 years	: 2.5%
50 to 54 years	: 2.4%
55 to 59 years	: 1.5%
60 to 64 years	: 1.6%
65 to 69 years	: 1.3%
70 to 74 years	: 1.1%

Source : Regional Service of Statistics

Besides the results of our survey show that in the sample of 150 residents there were 58.7% of men and 41.3 % of women. The average age of this sample is 46 years.

2-2-1 Demographic structures

At this level the case of Guet Ndar is particular. In fact the sample of the questionnaire consist of resident fishermen (100%)

This data is very simple because concerning the fishing activity St. Louis does not know the migration phenomenon. Those who come there are doing annex activities specially manpower to solve the transportation problem of product during the landings and the charging into trucks for wholesalers.

But there are problems and those related to the environmental aspect are not then much less: congestion of houses with serious hygiene and sanitary of diseases or affections. These persons are also in charge of small operations going along with the fishing process, such as processing for women. This manpower is mainly originated from agricultural zones (Baol and Kayar): Louga and Diourbel regions where agriculture is no longer feeding them.

Apart from these reasons we observe the migration caused by professional and security problems. The good experience of Guet Ndarian fishermen is submit to many request from abroad and within the country.

Inside the country the main destinations are: Kayar, Mbour, Joal, Casamance, but also the secondary zones of the Great Coast : Gandiol, Fass Boye, Lompoul,

Abroad: Mauritania is the first more frequented country with contracts signed with some

Mauritanian businessmen rayed from 3 to 4 months; but also other countries like Ghana, Ivory Coast, Congo, Gabon with also contracts with some Korean ship owner for a period of 45 days to 3 months. At this level about 1,280 fishermen leave yearly for this form of fishing named «collection fishing».

The financial incidences of this type are extremely important. This point of view will be developed in the following sub chapters.

For the security reasons we observe the existence of the Bar (big breaking waters a about 300 km of the coast. It is a permanent troubled zone for the fishermen . And one should a true Guet Ndarian to avoid this zone. According to many sources, a number of 20 to 30 deaths are registered every year plus many damages of the equipment (engines, nets, boats). It is also one reason why migrant fishermen are not fishing in Guet Ndar.

2 - 3 Productive activities in Kayar

2 - 3 - 1 Typology

The typology of productive activities of the sample interviewed is as followed:

Professional groups	%
Fishermen:	50.3 %
Processors:	30.7 %
Wholesalers:	22.0 %
Carpenter:	2.0 %
Gasoline distributor:	1.3 %
Mechanics:	0.7 %
Others:	0.7 %

The socio-economical analysis of each activity permits to do an evaluation of their impacts in the evolution of the network. The socio-economical analysis of each activity show the importance of this fishing activity in the St Louisian economy in particular and that of Senegal in general.

A) Fishing

According to the data of this table, we see that presently the catches in St. Louis represent about 38,000 ton s per year among which 62% of *Sardinella*, 25% of demersal species and the remaining of other species. The whole for a turnover of 9 billions Fcfa and this despite the constraints related to big breaking water which causes losses estimated to 200 ton per day.

Because of this phenomenon, 50 % of the active fishing equipment of St. Louis is somewhere else. That would explain this wide migration movement of St. Louisian manpower.

In relation to the national production St. Louis is about 20 % behind Mbour/Joal considering the migration of St. Louisian manpower to the main fishing zones, the contribution of St. Louis in the revenues of sea products would represent 40 % of the national productions of the sector of artisanal fishing, according to the same sources.

In addition, considering incomes generated by collection fishing (Korean boats).estimated to 2 billions CFA Francs every year and those from Mauritanian campaign (3 to 4 months) where each fisherman's family come with a turnover ranged from 15 to 20 millions CFA Francs, the participation of St-Louis would be 50 % total according always to the same source.

Among the other indicators of the importance of this fishing activity we should signal the evolution of the motorization which has a regular progress from 1760 in 1992 to 2800 in 1995 representing 62.85 % which is a good performance

During the same period(1995) Saint Louis has 16,000 fishermen representing 32% of the national number that is 50,000 fishermen.

Besides the results of the exploitation of the questionnaire show some indicators that would also permit to appreciate the importance of the fishing activity from the consumption and saving incomes.

In fact as for the bracket of the monthly income 50.7 % of the sample interviewed earn more than 150,000Fcfa; 16.2 % earn respectively 100,000 and 150,000Fcfa..

As for consumption, the item related to food service gives more information on the particular high purchasing power of fishermen. In fact 14.0 % of households consume 90,000 per month; 11.3 % for 150,000; 3.3%, 300,000 and 0.7 % about 450,000 per month.

As for saving, 110 persons of the sample representing 73.3% is practicing it with some variables. At this level hoard or amassing of money (32.7 %) and tontine (19.3 %) are the most popular.

B) Processing:
The execution of this branch is entirely reserved to women processors. T his activity is practiced in two sites essentially Diamalaye or Sine located in the South of Guet Ndar and that of Goxu Mbadj in the North.

Sine (processing area in Wolof) of Guet Ndar: Built in 1957, it is located near the sardines landing sites 2 years ago. It is composed of drying areas of 2000 m^2 and used by 600 women for artisanal processing. This site was congested long time ago. We should say that the cohabitation with the landing point activities is a problem because one part is also for the wholesaling operations. In fact, the cohabitation is also increasing the lack of space problem.

As for the equipment of the site, the existence of a weighing hall and a storage of a capacity of 100 tons. To improve the working conditions of women on this site, a potential extension project should be implemented.

Processing site of Goxu Mbadj: Located on the extreme North of the district, with a sufficient area of 3500 m2, this site has never been developed on the contrary of that of Guet Ndar (Sine). About 100 women are working there in difficult conditions: no electricity and security. The development of this site would solve at the same time the problems encountered by women in Goxu Mbadj and those of the landing site of Guet Ndar. And it would profit to the women processors in Goxu Mbadj.

- Union of the Operators of Artisanal Fishing of the Great Coast
The intervention of this union is wider with various activities. From micro-wholesaling to processing and the small business of products. The site where this Union is present are: Guet Ndar, Gandiole, Hygrobase, Sor Diagn and Goxu Mbadj.

The Union is coordinating the activities of 23 GIEs with 762 women. Among these 23

GIEs, 15 have already their bank account and 3 received a credit for operational funds of an amount of 2,765,897 Fcfa. The present reimbursement rate is 98% which is a good performance.

The activities of this union had been sufficiently analyzed on the chapter dealing with the local organizations. Considering the approach followed, the quality of its resource persons and the impacts of the obtained results, the Union is becoming more and more a unavoidable structure for any improvement project for women's activities in the fishing sector.

Analysis of the Production and movement

The quantity of processed products in 1992 registered at the level of the control post of the Regional Service of Fishery had been estimated to 1,591tons in 1992 and 2,697tons in 1994 for respective commercial values of 348,108,500 Fcfa and 335,242,000 Fcfa. This commercial value was 498,641,150Fcfa in 1996.

The marketing movement of the production is essentially done in the national market and the sardines are prevailing. As for exportation, it targets the sub-region and the countries such as Ghana and Benin. For these countries the dried and salted species are those preferred.

Schedule of Activities

The peak season is between Marsh and September, period corresponding to the peak season for fishing activities. The lean season is from September to December and January February.

Problems

- Facilities

These are common problems to all the processing sites. The site are not equipped (Storage halls, shelters for working and sanitation, garbage collection, space management for the different enterprises)

-Marketing

The access to fresh fish is not always easy because of the luck of financial means. Women do not master the marketing and exportation network. Transportation is expensive.

- Wholesaling:

It is characterized by the cohabitation of two kinds of activities. Wholesaling needs the implementation of material(Refrigerating trucks) and financial means. Generally this activity is led by big businessmen. But in Saint Louis we notice the participation of 3 women in the management of this activity.

The second form (micro-wholesaling) is practiced by almost 100% of women; They are in charge of the distribution of fresh product in the local market of St. Louis and its whereabouts. They get the supply directly from the landing sites the same time as the wholesalers. For this category of wholesalers the individual monthly incomes are ranged from 25,000Fcfa (0.7% of persons in the sample) and more than 150,000Fcfa(50,7%).

As for the first category which has more means, the monthly data was not easy. But we referred to the table of the evolution of the movement for the last 5 years (92 to 96 on the item related to fresh wholesale products. The reason why 25,215 tons had been wholesaled in 1992;

30,425 tons in 1993; 14,054 tons in 1994 and 19,634 tons in 1996. Regarding the commercial value of the catches during the same periods, we evaluate the commercial value of wholesaled products as followed:

Downstream production, wholesaling is an extremely sensitive activity because it aims to promote the fishing activities as an element in charge of treatment and distribution of the fresh product. We should state that its implementation goes along with many accompanying measures logistics (adapted trucks for transportation) and preservation facilities or production unit of ice. Also space is necessary for the correct execution of the activity. Two sites are available to extend this activity but in various degrees.

-The landing Site in Guet Ndar
It is the main wholesaling. At the beginning it was for artisanal processing. Due to the fact that the space was very tiny (2000 m²) for the different the different enterprises, a decision to close it and move it to Goxu Mbadj was taken by the municipal authorities. This idea met a negative reaction from Guet Ndar Fishermen.

In fact they did not like this area and asked for an authorization to land in Guet Ndar. in agreement with the users (women processors), some spaces was cleared for the wholesaling activity. The first works realized on this site(transportation of sand, building of concrete and walls, electricity etc..) was done by the beneficiaries themselves.

Quickly it becomes the first landing site of the town and showed its weaknesses. Its capacity to contain the parking of trucks in peak season (70 trucks per day) Some development works are still going on in order to improve the working conditions of fishermen, processors and wholesalers.

These works are mainly

- The building of concrete floor for the draining of waste waters
- The construction of toilets. But despite all these efforts the space problems is accurate on this site

- The landing site of Goxu Mbadj
Located on a zone where areas to be developed are the object of a particular attention this site has the advantage of being a wide area of 3,500 m². In the north of the district, municipal authorities planned t transfer there the landings of sardines done before in Diamalaye (too congested). But in waiting for the implementation of this project, a bad policy of the use of the space is today the origin of the site's overcrowded aspect. The anarchical way of constructions of shops is reducing the space which was the main advantage of this site. Maintain this site as the main landing point should be the municipal authorities objectives who should do their best to protect this precious space.

- Equipment:
In St. Louis there are some preservation units for the production of ice for the wholesaling activity. Nevertheless, considering the low cover rate of these units (about 30%), the emergency to have additional equipment is a reality. In the meanwhile the wholesaling enterprises are trying to fill that gap from Dakar with many difficulties.

- Problems encountered by the wholesalers

- lack of preservation facilities and ice production units

- difficulties to access to credit for operational funds and to increase the supply of products.
- difficulties to access to credit for equipment credit to renovate the logistics
- difficulties to access to credit to increase the supply capacities
- lack of preservation facilities for fresh products
- high cost for the transportation and distribution of products on the neighborhood of St. Louis

2-3-2 Impact of productive activities

This impact will be analyzed on a quantitative and qualitative point of view.

- Quantitative analysis

This part will focus in one hand on the monetary income of the activity of fishing and on the other hand the investment realized from this income and its incidences on the population's well being. Also this will explain precisely the place of St. Louis in the national level in the sector. On a financial point of view, many indicators permit to appreciate it:

- the table related to the evolution of the network during these last 5 years : the value of the fresh and processed products reached respectively in 1994: 9,123,310,500 Fcfa and 335,242,060 Fcfa.
- the brackets of incomes of Saint Louisian fishermen who goes to Mauritania for campaign is ranged from 15 to 20 millions per 3 persons unit.
- for collection fishing with Korean boats for 45 days on the African coast the incomes are about 2 billions Fcfa for 1280 fishermen.

- Qualitative analysis

Some events explained the incidences of income on the importance of on the monetary income of the investment realized and their effect on the quality of life of the population. According to the survey, production equipment and particularly the motorized boats which increased from 1,760 units in 1992 to 2,800 in 1995. The impact of fishing is also observed on the quality of inhabitation's living and well being conditions in the sense that 96% of persons interviewed have built houses, 98% have electricity, 98.0% have current water, 78% have a TV post and 85.3% have a post radio

Analyzed in the point of view of the monthly food consumption of the populations, the impact if the network is also important. In fact 9.3% consume 120,000 Fcfa per month, 5.3% about 180,000 Fcfa and 0.7% about 450,000 Fcfa.

Moreover despite this important potential of available financial means the quality of life of Guet Ndarian populations depend on the sociological heaviness characterizing fishing villages. for this effect one of the most important weakness is the housing conditions whose bad conditions of hygiene can not favor good living conditions. The other worrying problem is the weakness of the sholarisation level as shown on the following table.

	Male	Female	All
illiterate	69 %	75 %	73 %
primary school	25 %	21 %	
average education	4 %	3 %	3 %
secondary school	1 %	1 %	1 %
University level	1 %	1 %	1 %

Source : Regional Service of statistics Saint-Louis

Despite the theoretical intentions of the interviewed persons, there is a lack of interest for the school. For these population sending the children to school is a waste of time because the product of such training is the unemployment and laziness.

The fishing activity is a priority because one can earn money quickly and better one's social status. Such assertions can seem unbelievable if we consider that St Louis is one of the regions more affected by French colonialism. and was thus the first capital city of Senegal.

2-3-3 Institutional capacity of organizations in the fishery sector

Considering the increasing involvement of the organizations in the management of their own business, the important role they are playing becomes a reality.

That's why it was signaled during the survey, the existence of many organizations such as: The Federation of fishermen's GIEs, the Federation of wholesalers GIEs, the Collective of fishermen, the Union of Operators of artisanal fishing. Moreover despite the willingness of most responsible, these organizations lacks a training that would help them take more initiatives in the management of the fishing sector. Efforts are being made in this sense. That is the case of the Union of Operators of Artisanal Fishing which benefits from a support in training in the field of literacy and management.

In order to have a better management the financial resources of the sector, the federation of Fishermen GIEs set up a saving and credit mutual. This proximity management is among the major preoccupation of actors who is getting ready for the management of their own future projects. Despite these numerous initiatives to encourage the implementation of new projects to be managed by these organizations, sustainable actions of popularization, information and training should be taken.

The implement of a project to be managed could be an excuse for the awareness of populations on the importance of education which is a precious element for social fulfillment.

2-4 Annex activities to fishing

It concerns mostly the craftsmen who are playing essential roles on the making of production equipment (boats) as well as the maintenance. As for the gasoline distribution, we counted 12 stations in the Langue de Barbarie distributing an average of 850,000 liters per month. At this level, the lack of gasoline is an exceptional case in St. Louis.

The results of the survey permitted to identify other annex activities, In fact 3.3% of the interviewed sample are doing food services in addition to their main activity, 2,0% are doing agriculture, 99 of them representing 66,0% do not have secondary activities whereas 11,3% have secondary activities but did not precise it.

3 Space occupation - Equipment - Facilities

3-1 Scholar equipment

The survey permitted to count the existing facilities.

- Public primary schools : 4
- Arabic schools : 1
- Secondary school : 1
- Private Schools : 1

There is also the existence of Students Parents Associations but is not as efficient as it

should be.

3-1-1 health facilities

We counted 3 health posts and a military nursery, the regional hospital of St. Louis and all these units function with the Health committee.

As far as the frequenting, the survey revealed that 113 persons of the sample representing 70.7% are going to the health post, 8.0 % to the community clinic (health post) of Goxu Mbadj; 12.7 % to the regional hospital and 1.3% the military nursery.

3-2 Highways and various networks

The accessibility to Guet Ndar has no problem. But the interior road very sandy and degraded, with a heavy traffic of horse cars which play an important role in the transportation of products and persons inside the district. This problem is more accurate in Guet Ndar because Goxu Mbadj has enough large roads.

- Water supply network

The supply of potable water in Guet does have major problem. 96,0% of households have access to current water.

- Electricity network

Generally accessible. But the public lighting should be improved specially on the landing and processing sites. There are security problems in the processing site of Goxu Mbadj at night. As for the domestic electricity in the houses, 98,0 % are connected to the main network

- Cleaning up

Generally this problem is very serious in Guet Ndar. From the draining of waste waters, rainfall waters to domestic garbage. Aggravated by the non respect of elementary urbanization norms. It becomes worrying at the production site: processing and wholesaling which was an alert of the authorities to undertake development actions

- the building of concrete floors for the processing area and the parking of trucks
- the setting up of a draining system for waste waters
- construction of public toilets.

- Management of domestic garbage

Theoretically the collection of households garbage is municipalities task. But because of limited means this latter is not executing correctly all its obligations and duties.

3-3 Installments on the Maritime Domain and problems

It is difficult to separate the zone occupied by inhabitants and the Maritime Domain which is also used as a landing and processing sites. This comprehension level being not well perceived and understood by the populations is not a major concern for them. Nevertheless an awareness action should be undertaken on that direction.

4 Social and socio-professional organization of migrants

There is practically no migrant in St. Louis, the reason why the sample interviewed is composed essentially of residents. Moreover some questions in relation to the migrants target have been asked and permitted to have some reactions to be taken into consideration without going into details, specially migration.

The importance of the migrating flux: two cases have been considered. The departure of

St. Louisian fishermen to Mauritania for campaign or with Koreans ship-owners in the sub-regions countries(collection fishing) or inside the country : Kayar, small coast, Casamance. This king of migration and its incidences have been sufficiently analyzed in the preceding chapters.

The second case deals with the manpower for the activity of the fishing. They are mainly workers who stay in Saint Louis and in charge of interior transportation of products. Their intervention in the processing network with daily incomes ranged from 3,000 to 5,000 Fcfa in peak season and 1,500 to 2,000 Fcfa in dead season. These workers are generally originated from Jaol and Kayar. Their cohabitation with the residents causes no problem.

- Comments on Migrants

The sample interviewed shows that: 4.7 % have problems with the migrants against 90.7% contrary opinion. For theses problems listed, 2.0 % of the sample say that these problems are specially wholesalers (problems related to financial transactions); 0.7% is attributed to processors and their clients). Whereas 96.7% did not give their opinion to that problem, the Kayar report should give precious details on that matter. But the case of the migration of manpower in St. Louis deserve a particular attention.

5 Groupings performances and access to credit problems

5-1 GIE (Economical Interest Grouping)

45.3 % of the sample interviewed do not belong to a GIE, 3.3 % did not give their opinion and 51.4% are members of a GIE. This situation reveals favorable tendencies of the fishing sector .

As for the identification of their participation, 6.0 % of persons interviewed are members of Bokk Jom, 6.0% of Bokk Xalat Liggeey, followed by Sopp Khadim (3.3%) and Federation of fishermen's GIEs(2.7%) etc.

Results of the GIEs:

Purchase of engines	2.7 % of the sample interviewed
Purchase of boxes	8.7 %
Operational funds	127 %
Purchase of nets	1.3 %
Regulation Action of prices	1.3 %
Better organization of transport	3.3 %
No credit	12.0 %
No opinion	54.0 %

Difficulties of GIE

No difficulties	23.3 % of persons interviewed
Small loans	1.3 %
Short reimbursement period	1.3 %
Lack of funding	4.7 %
Lack of materiel	1.3 %
No markets	0.7 %
Heaviness to access to credit	0.7 %
Misunderstanding between members	0.7 %
No opinion	65.3 %

Proposed solutions
At this level 1.7% of the sample suggest the creation of banks for the GIEs, 2.7% give no opinion. 1.7% think that it is better to work individually without the bank and 0.7% suggest to go to justice for the reimbursement of loans.

5 - 2 Female Groupings

72.7% of the sample do not belong to a grouping and 4.0% give no opinion 23.3% are members. Among the identified groupings 5.3% belong to Bokk Xalat Liggey, followed by Bokk Xalaat Jambaru Sine (2.7%) and Daru Salam (2.7%). Like the GIEs the increase number of female grouping a good sign for the common management of future projects to implement.

6 Populations living standards

The assessment of the living standard of populations in relation to the average individual income is not easily quantified moreover a qualitative appreciation from the survey can give us precise information.

For that purpose the sub-chapter No.23 on productive activities insisted on the question from the data collected on the mains activities. And their effect on the populations living standards

Besides specific data collected permitted to have interesting conclusions on individual incomes particularly in the chapter dealing with the income of the sector ranged from a minimum of 15,000Fcfa and a maximum of 360,000Fcfa and 600,000Fcfa per month.

For the income bracket the situation is as followed:

Income	%
0 - 25,000Fcfa	0.7%
25 - 50,000	4.7%
50 - 75,000	10.7%
75 - 100,000	16%
100 -150,000	50.7%

The origin of the income is the main activity as stated by 79.3% of persons interviewed. As for the consumption expenses, food expenditures is the most important and ranged from 360,000Fcfa to 450,000Fcfa per month. Then the housing, leisure, reimbursement of debts, religious expenses, children's education and family ceremonies.

For saving, its amount is between 1,000 and 200,000 (maximum). On this item 19.3 % is for tontine, and 19.3 for hoarding, 32.7% is for the most popular savings forms. That is to say that generally the modern forma of savings are not well developed within this population. We can hope that the project of the Mutual for Saving and Credit will change the mentality.

Concerning the comfort level of populations, many efforts remain to be done despite the importance of the incomes generated by productive activities.

The priority would be to improve the management of resources in order to have a better orientation of the investments. The environment aspect should be taken into account in order to have a judicious management of the space. Also to improve living standards and

children's education in Guet Ndar must be reflex to guarantee of social sustainable progress.

7 Identification of needs and priority

7-1 at the village level

The priority needs are the improvement of the public lighting specially in overpopulated areas where the productive activities are concentrated: landing, processing and wholesaling sites.

The other priority is the setting up of publics toilets in order to fight against the proliferation of diseases related to human waste.

The awareness and education of the population on the importance of bettering the environment; cleaning programs of the districts, hygiene in production zones by local organizations and GIEs.

This must go along with a draining systems of waste and rainfall waters.

7-2 At the level of fishing operators

These needs and priorities are examined according to the activity

7-2-1 Fishermen

A credit system should be implemented to facilitate the renewal of existing equipment (very old): boats, nets, but specially engines with a possibility oh tax exemption.

- Creation of a storage for spare parts
- The improvement of the landing site of Guet Ndar and that of Goxu Mbadj which has extension possibilities: 3 000 m^2 available.

Anyway the access to credit must be done without any heaviness of the bank procedures. In fact it was revealed during survey that the migration of Saint-Louisian fishermen to Mauritania is caused by the facilities, the acquisition of equipment offered by the operators in this country.

- The creation of cold storage for the preservation of products in peak season

7-2-2 Wholesalers

They have the same possibilities to access to credit. It is mainly used as operational fund to increase the capacities of their interventions which are very limited considering the catches in peak season.

- The rehabilitation of the landing site of Goxou Mbadj which is a priority considering the existing possibilities for extension.
- The equipment of preservation units for the distribution in the interior.
- Support in the field of training to allow them to access to exterior markets (specially Europe)
- Support for operational funds for micro-wholesalers.

7-2-3 Processors

They need a small credit to facilitate the improvement of equipment: drying trays (tables), salting boxes, and small equipment necessary for the different operations of processing.

- Support in technical training or technology in order to better the quality of products for a better competition.
- The development of Goxu Mbadj has become a priority for women in that area.
- The rehabilitation of the ice facility complex for processors. This complex stopped its functioning since 1990 because of a bad financial and technical management of

its equipment. These installments need a funding of about 100 millions Fcfa. Considering the possibilities it offers:

- Stocking capacity : 30 tons in congregation
- Refrigerating tunnel : 6 tons per day
- Ice production : 480 bars representing 12tons per ton

It's rehabilitation would solve the problem of the lack of ice in St. Louis in the favor of the activities of processing, fishing and wholesaling

8 CONCLUSION

The study on the Development of the Fishing Communities realized in St. Louis during the month of June 1997 permitted to analyze the importance of the potentialities of the fishery sector in St. Louis. But, despite the advantages, the development of the fishing sector and the fishing communities in St. Louis has many serious problems related to many factors.

- The lack of preferment facilities for preservation and production of ice which constitute a major difficulty considering the importance of the catches, specially in peak season.
- The lack of a credit system adapted to the sector is hindering the renovation of production equipment(very old now).
- The luck of appropriate development at the level of the landing sites preventing a comfortable exercise of this activity.
- The negative effects of the bar or big breaking waters on the production and security of fishermen is also a main concern of the populations and

In the social field, many weaknesses have been noticed

- Lack of interest for the children's education.
- The high occupation rate causing an overpopulation of Guet Ndar. The solution of this problem is an emergency for the future development of the Guet Ndar Community.

In fact there is a gap between the rapid growth of the population and the space. The consequences of such a situation is negative for the population's health and the Municipality should find out alternatives.

In fact these consequences constitute the main reason why St. Louisian fishermen are migrating to other regions of the country. And Kayar is a concrete evidence.

Considering all these problems (which are not all), the search for solution is necessary by the creation of projects which implementation would contribute to the improvement of working conditions of actors of the sector in St. Louis. All this must go along with an accompanying program of popularization, information and training.

The question of the coherent management of the space in order to solve accurate the environmental problems of Guet Ndar should be the authorities' main concern.

POPULATION DISTRIBUTION IN THE COMMUNE OF ST. LOUIS BY DISTRICT AND GENDER IN 1996

NAME OF LOCALITY	MALE	%	FEMALE	%	TOTAL
HIGH GUET NDAR	3,915	3.2	4,145	2.8	8,061
LOW GUET NDAR	4,788	3.2	4,635	3.1	9,423
HIGH NDAR TOUTE	2,148	1.4	2,499	1.7	4,647
LOW NDAR TOUTE	1,685	1.1	1,726	1.2	3,411
GOXU MBADJ	5,095	3.4	5,214	3.5	10,309
LANGUE BARBARIE	17,632	12.0	18,219	12.0	35,851
NORD CENTER	2,370	1.6	2,761	1.9	5,131
HIGH NORTH	2,044	1.4	2,162	1.5	4,206
SOUTH	2,109	1.4	2,265	1.5	4,374
DIAMAGUENE	4,597	3.1	4,963	3.3	9,559
SOR NORD BALACOSS	2,417	1.6	2,604	1.8	5,021
DAROU	8,377	5.6	8,779	5.9	17,156
NDIOLOFENE SUD	2,373	1.6	2,483	1.7	4,856
NDIOLOFENE NORTH	3,494	2.4	3,467	2.3	6,960
LEONA I	6,730	4.5	6,807	4.6	13,538
LEONA II	3,689	2.5	3,694	2.5	7,383
PIKINE I	3,527	2.4	3,810	2.6	7,337
PIKINE II	7,959	5.4	8,171	5.5	6,130
SOR DIAGNE	2,154	1.5	2,285	1.5	4,440
KHOR	1,035	0.7	1,091	0.7	2,126
DAKHAR BANGO	1,764	1.2	1,657	1.1	3,420
NGALLELE	436	0.3	488	0.3	924
WHOLE	72,705	49.0	75,708	51.0	148,413

Appendix 3-2

DETAILED SURVEY
ON
FISHING COMMUNITY DEVELOPMENT
IN
KAYAR

CONTENTS

1 Presentation of the study Zone

The village of Kayar is located in the rural community of Djender, county of Keur Moussa, in the Thies region. It covers an area of 1,604ha. In the North of the rural community and limited by the lake Tamna in the East, by the Atlantic Ocean in the West, by sand dunes and the offshore bars, in the North by the Lake Mbawane and in the South by the extension of the Niayes and the village of Keur Abdou Ndoye.

The site of Kayar has a double potentiality at the same time agricultural and fishery related that permitted a diversification of the local economical activities. The soil potential in Kayar favors agricultural activities, hydromorph soils of the Niayes occupy an important area and are very propitious to market gardening.

The hydrology is also favorable. The phreatic underground is a bit profound. The depth of the wells is between 1 and 7 meters. We notice the presence of two ancient lakes. the lake Mbaouane and the lake Tamna that dried following the drought. During rainfall the site is occupied by mares.

The richness of the site in the collective memory would explain the attraction of the zone since 1860 with the Djaraf Mbor Ndoye, founder of the village. He was accompanied by a Lebou community avoiding the epidemic of plague prevailing in some indigenous districts of Dakar. In discovering this site abounded with fishes and offering the advantage of fertile humid lands, the founder screamed with joy saying "Kar Yil Yar" expressing his gratefulness to God. For these two opportunities: the dunes for agriculture and the sea for fishing. By deformation this expression gave the names of Kayar.

1 - 1 Social organization

The access to power was organized until 1960 on the principle of hereditary descendant to the founder. At this date some internal contradictions brought about revisions by institutionalizing the election of the "Chief". The Chief or Head of the village is assisted by notables whose members are chosen by himself.

In the structural chart of the power management, we also have some "pene" exercising at the level of the district. They don't have any deliberation vocation but are rather consultative structures. We have three:

- Digg;
- Buge Gaolo; and
- Darou Salam.

1 - 2 Local economical activities

The local economical dynamism created an important population movement rendering the population levels fluctuating from one period to another. Up to 1950, Kayar was suffering of enclosing due to the difficult accessibility. The connections with big roads with the realization of the main paved road contributed to the local economical expansion. From a an auto consumption economy quite exclusive, Kayar progressively enter the regional and national marketing networks. Today fishery products are supplying the big urban markets of Dakar, Thies, Diourbel, Kaolack etc.. In fact Kayar is today one of the biggest fishing centers in Senegal. Fishing is the first activity in the zone before market gardening which is an important sector.

The site benefits from favorable hydroclimatic influences and the presence of a marine pit. Fishing is practiced on a long side of 35km. Its coasts abundant with fishes are attracting fishermen from other zones. According to the report of the Japanese mission « the number of

fishermen in 1995 was 4,113; there was about 396 processors (the average productivity was about 12.5 tons per processors) and 570 wholesalers were concerned by the fishing activity"

The produced and processed quantities per year are very important. According to the yearly report of the Fishery Service, Kayar furnishes 20% of the total landings of the Thies region and 12% of the Senegalese artisanal fishing".

1 - 3 Demographic characteristics

1 - 3 - 1 demographic structures

The general population census realized in 1988 stated that there were 7,307 inhabitants in the village of Kayar. The update realized in 1995 by the CERP of Pout estimated the total population to 8,573 inhabitants, considering that the global yearly increase is 2.7%. (About 9,000 according to the report on the development of the fishing zone in the North by the Japanese mission-1996).

Among the 91 residents interviewed, we have 59.3 % of men and 40.7 % of women. For migrants there are more men heads of households than women (7.8 % against 24.2%). The average age is 42 years for residents whereas for migrants, it is 39 years. Apparently the migrating population is younger. The less than 50 years represents 80% for migrants against 66% for residents. The analysis of the family structure shows that there is al least 3 households per family for residents and 2 for migrants.

FAMILY STRUCTURE BY NUMBER OF HOUSEHOLDS

Number of households	% Residents	% Migrants
01	25.3	36.4
02	24.2	28.8
03	19.8	13.6
04	13.2	7.6
05	6.6	9.1
06	5.5	4.5
07	2.2	-
08	2.2	-
19	1.1	-

The family structure is heavier for residents. There is no family with more than 6 households with migrants, whereas for residents they represent 5.5 %. The families of 3 to 6 households represent 34.8% for migrants and 45% for residents.

Generally the family structure is very large in fishermen's milieu. The house contains a large family, but even if the incomes are individual per household, the consumption unit is rather

collective. Each households gives a contribution to the head of the family who is managing the collective consumption.

The number of persons per households is about 10 for migrants as well as for residents. It is a bit less high statistically for residents(9.9%) than for migrants 10.48%). In average there are two women per household for the residents as for the migrants. The households of 1 to 2 women represent 83% for residents and 74% for migrants. The number of children is about 6 for residents against 5 for migrants

Number of persons in active life per household

Number of person life in active	% Migrants	Residents
0 - 4	57.1	67
5 - 9	26.9	26.4
10 - 14	6.4	2.2
14 - 19	4.8	3.3
20 - 24	4.8	1.1
TOTAL	100 %	100%

1 - 3 - 2 demographic structures in migrants communities and population movements

The different sources we consulted agreed to state that the population of Kayar double in peak season with the arrival of seasonners or migrants. The most frequent assessment is about 16,000 inhabitants.

a) geographical origins and migration reasons

The survey done in Kayar gives us some precise quantities indications on the origin of migrants: 90 % come from Guet Ndar

Original Site of Migrants

Origins	Number of households	Percentages
Dieurbel	01	1.5
Gandiole	01	1.5
Mbar	01	1.5
Rufisque	02	3.0
Saint - Louis	60	90.9
Toubatoul	01	1.5

This migration of Guet N'dar fishermen towards Kayar is relatively ancient. The essential reason is that the Kayar coast is more abundant with fishes. 68% of persons interviewed give that reason. 36% of migrants state that the choice of the migration site is related to the ancient migration practice now part of their tradition.

Also 12% of the interviewed support that the choice is closely linked to family reasons. For this group, we can give the hypothesis that the choice of resident is now fixed in Kayar where the whole family live and they go back to Guet N'dar only in dead season. The security reasons are also listed in the choice of the migration site. The big breaking waters problems at this spot is less important than in St. Louis. So security is thus more certain in Kayar than in Str Louis.

b) choice of migration period and activities

These two reasons given here are also determining factors in the migration period (security reason: 19.07%; and fish abundance period: 68.02 %). This migration concern heads of households. They are men in their majority (76%), and women represent 24%. 34% of heads of households migrate with their whole family and 66% with only some members.

65% of heads of households are aged between 20 and 45 years, 18% between 46 and 50. 11% between 52 and 61. The more than 61 years old represent 6%. Essentially they are working in fishery. This activity occupies 76 % of migrants interviewed and almost all men. The women are intervening mostly in processing (15%). The wholesaling activity concerns 7.6% of migrants households.

The annex activities are not significant (15%): They concern mainly the migrant population coming from zones other than Guet N'dar. They represent about 9% of the total migrant population. They are coming from Mbar, Toubatoul, etc.. Essentially the migrant are exercising one activity for full time: 87% of them don't have secondary activities. For those who have it, 5% work in food services(restaurants), 2% in agriculture and 6%in other various activities.

c) households structures in migrants communities

The average size of the households is about 5 persons. Nevertheless this average is far from the important differences as we can notice it in reading the table of the family structure of the 66 households interviewed (see Table B2: Family structure). The households without children represent 1.5% of the sample, whereas those of 01 to 032 children represent about 34%. This proportion is 35% for the households of 04 to 07 children. The households of 08 to 12 children represent about 12 % of the sample.

d) duration of migration and activities schedules

68.8% of the persons interviewed are faithful to their usual migrating site whereas 31% go the different place. On average, the migrants stay 8 months in Kayar and 4 months in Saint-Louis. The results of our questionnaires show that most of them stay in Kayak for 5 to 7 months. they represent 72% of migrants heads of households. 21.8% stay for more than 7 months whereas those who stay for at least 4 months represent only 6.3%

In the period from December to July we have the most important flow (56.1%). It corresponds to the peak season for fishing and related activities. Generally, the average duration of the stay in St. Louis is 4 months (56% of migrants) and covers the period from July to November/ December. However, even if they stay in Kayar for a longer period, 67% of migrants are not ready to be installed there definitely.

The relationships linking them to their original villages seemed to be stronger than the working reasons (opportunities) occupying them in the migration sites. This relationships is rather psycho-sentimental, because it is an identity claim in reaction to the repulsion sentiment some of

them are victims. In reality they are physically more linked to their working sites than to their original villages. They are working there, they have their families there and they stay there for a longer time. 69.2% of migrants have their own houses in Kayar and 89.2% are built. This explains very clearly a lasting residential choice in Kayar. This seems to be true because the results of the questionnaires shows that the migrants are building more houses in Kayar than in St. Louis. In fact their original houses are built (59% in St. Louis against 89% in Kayar), and 10% of them are made with hay and wood in St. Louis.

Apparently the quality of habitation is better in Kayar than in St. Louis. The over population of the original village, the luck of space constitute also a strategy for the Guet Ndarians migration to access to properties, quite impossible for the last generations, because of the congestion of the original village. This migration flow seems also to be a mean of fighting against the congestion of Guet Ndar therefore a way of access to the real estate and participate to young households emancipation. This hypothesis seems to be more reasonable because, even if as we all know, the land ownership insecurity is a problem due to the fact that many houses are located in the maritime domain which occupation is illegal.

e) Choice of children's education sites

12% of migrants register their children to Kayar and 1.5 % to Rufisque. Totally, 14% of them register their children in their migrating site. Only 14 % register their children in St. Louis. I seems that the scholarisation of children is done more in the migrating site than in the original village. Which strengthens the hypothesis of an effective residential choice in Kayar rather than in St Louis. Moreover the insufficient answers we get from the questionnaire oblige us to be safe as for the interpretation of this result. In fact 54 households over 66 interviewed did not answer to this question.

f) comfort level

In Kayar 77.3% of migrants have electricity at home for an average expenses of 5,295.9Fcfa. On the contrary current water does not exist, the water supply is done from the wells that are not profound in this zone. 31.7% have their television post, 94% have a radio post.

The telephone network is not developed but there are some private telephone centers in Kayar (about 3). At last ,we notice a tertiary sector very important, the local market permits to the population to get the supply of various products. The transportation sector is also improving, some vehicles are doing the liaison with the local centers: Bayakh and Rufisque.

2 Space occupation, facilities and equipments

Kayar has 3 districts: Darou Salam (bigger and more populated), Point Rond and Pencum Digg. There are also some recent sub-districts: Taante yoff, Tefess, etc.. In the occupation mode, we note a division of the habitation zones between residents and migrants. The main road divides the village into two different parts: the migrants occupy the zone located between the road and the village. This zone (district Taante, Yoff and Tefess) are in the maritime domain. Its occupation is illegal and thus exposed to a possible clear off if the State decides to take back its lands.

Today the extension of the village is done towards the zone North-West. The South is surrounded by shallows, main zone for market gardening production in the village. The West is limited by the Ocean. The North-West has a belt of vegetation of the dunes fixation project. The risk of deforestation are important if we consider the insufficiency of available lands to extend the village.

2-1 School equipment and education

There is one primary school with 12 classrooms in Kayar. Only 15.4% of persons interviewed are literate in French for the residents, and this rate is quite similar to that of the migrants. 31% of residents are not literate at all, against 36.9% of migrants. The literate in Wolof and Arab represent the same proportion for the two communities: 45%. Generally, the French education in primary school is considered as not useful for fishermen. Their children are bound to intervene in fishing where they can have more important incomes than in the professional life offered by the French school. Only the half of persons interviewed send their children to primary school: 33% prefer to send them to Koranic school whereas 23% consider the French education not useful.

Nevertheless even if the French school seems not necessary to them, they are asking for some practical training corresponding to concrete needs related to their activities: 75 % for migrants and 88% for residents. The demand for training for the two communities is for functional alphabetization and management. This demand is expressed by at least 80% persons interviewed in both communities.

2-2 Health facilities

There is only one health Center in Kayar supervised by a nurse. He is assisted by some midwives and ASC (community development agent). A health committee is in charge of the operation and management. The center suffers from a luck of agents and medical equipment. The rooms are in very bad conditions. The luck of ambulance is making the evacuation of sick persons quite impossible, namely the emergencies which ending often to death. The fishermen's Committee engaged some rehabilitation works and the funds necessary are fixed at around 700,000Fcfa.

We notice also that certain inhabitants of Kayar prefer to go to the Monastery health center of Keur Moussa. They represent 7% of the persons interviewed. 93% go to the health post of Kayar and wish a bettering of the quality of medical services.

2-3 Administrative equipment

There is a mail office, a departmental Service of Fishery, and a Gendarmerie. The public services give satisfaction globally to the persons interviewed. 91%of migrants interviewed and 73% of residents assess the satisfactory services given.

The two services giving more satisfaction is the fishery service (31.9% of residents and 24.1% of migrants), then the Gendarmerie (10.5% of residents and 21.3% of migrants). The important role of the fishery service is confirmed by the majority of the persons interviewed. This service plays a role of supervision and support advisory for fishermen. The strengthening of its means would contribute to a more efficiency of its actions. Also there are 3 private telephone centers, a bakery a big Mosque and a village pharmacy.

2-4 Highways and various networks

The transportation network is very limited. There is only one main road for the connection to the big axes. It crosses the village in the direction North-South and its influence is very weak. Its degradation is making the traffic very difficult and dangerous at some point. As for the disblocking network or secondary highway, it consists of some small path, badly paved opening the access to the beach.

In the part of the village comprises between the main road and the dunes (Eastward), the anarchical condition of the urban tissue with a very congested form of occupation tightening the plan. The automobile traffic is quite impossible and in case of emergency the first aids will have difficulties to access. The feeder roads between sub-districts or tertiary highway consists also of small paths not paved at all.

The fishery development project in that zone should integrate a rehabilitation branch to improve the highway network.

- Rehabilitation of the main road for a better accessibility to Kayar and to strengthen the connection to the national and regional road network;
- Enlargement and pavement of the paths between the main road and the beach
- Opening of new large paths and rehabilitation of the existing ones between the main road and the dunes.

This would integrate a global re-structure plan of the village that will be negotiated between the populations and other local actors.

2-4-1 water network

The water supply network does not exist in Kayar. The supply is done from wells and the phreatic underground is not profound at this point (between 1 and 5 meters). A drilling had been realized and it supplies the wholesale center and the fishery service.

2-4-2 electricity network

There is an electricity network in Kayar to which 76% of interviewed persons are connected. However this network cannot cover all the village, the reason why in the extension zone frequent clandestine connections create many security problems. This is the only element to note with the interviewed persons not connected to the network (about 23%).

Also the public lighting is quite non-existing in Kayar, which is a major problem for the realization of some activities in Kayar. The case of the processing activity, the luck of lights in the site is making the work and the security (thefts) very difficult at some hour.

2-4-3 cleaning up

The sanitation issue is a central problem in Kayar. there is no collective system for the draining of waste waters, rainfall waters and the collect of fecal matters. Domestic waters are poured on the streets, on unoccupied lands or at the beach. This latter is also used for fecal matters, leading to a real sanitation problem. The draining by the system of individual pits is very weakly practiced.

Local initiatives have been developed to tackle this matter. The village Development Committee(CVD) create a commission for the collect of domestic garbage. Five horse cars have been bought for that purpose. A financial participation is required for each households. The amount is fixed between 25 and 100Fcfa depending on the volume of the garbage. This local system is also a way to employ young villagers who succeed to have monthly incomes ranged from 13 to 15,000Fcfa.

However, the rudimentary equipment used cannot cover all the village. The increase of the number of horse cars and the small materials for the collection would help better this garbage draining. If no support is foreseen to strengthen the local capacity, this would favor the proliferation of savage dumps, which phenomenon can cause the problem of the phreatic underground pollution considering the small depth in Kayar. The piling up of garbage would go along with the proliferation of cockroaches, mosquitoes and other bacteria menacing for the population health.

As for the evacuation of faecal matters, actions have been undertaken. With a funding of the "Reseau 2000", toilets have been constructed on the beach for an amount of 1,000,000Fcfa. Each user gives a participation of 25 francs, the collected funds will serve for the maintenance. A part will be used for the salary of the guardian, who is caring for the keeping of the beach at the same time. A fine has been instituted for illegal users. In addition, thanks to the support of the City of Lorrient in France, a private toilets program has been realised by the CVD of Kayar:

35 toilets have been constructed. The beneficiaries will participate for 16,000F for a global amount of about 100,000 F per realised latrine. Besides, the CVD intent to use the residual funds of this program finish to finish another public toilet which construction has been started by Sen Pêche.

As for the draining of rainfall waters, it has less difficulties. There are some inundable zones, digs cut by the dunes elevation convolution. If the type of soil is sandy, the infiltration is done progressively after a period of stagnation of rainfall waters. In revenge when it deals with a type of soil clayish, the infiltration is more slow.

3 Local economic activities / productive

The natural conditions of Kayar determine determines largely the typology of the productive activities existing in this zone. As we already noted it in the first part of the study, Kayar has important potentialities for fishing , but also for agriculture and market gardening.

3-1 Agriculture and market gardening

In fact even if the result of our survey did not show it clearly (only 12% of heads of households declare it as secondary activity), marker gardening is very productive practice in Kayar. The important water and soil potential explains the traditional practice of agriculture in this zone. It is a population traditionally agricultural, and fishery was only an added activity for the native inhabitants.

But the improvement of the transportation facilities and the technological progress in fishing, in which the influence of the migrant Guet Ndarian community played an important role, operated a progressive mutation of the local productive apparatus.

A better master of the fishing techniques, the improvement of the equipment level and the increase of the catches going along, created a progressive insertion of kayak into the regional and national marketing flow. From an auto-subsistence economy where the search for auto-consumption was prevail, we are assisting now to a marketing monetary economy.

This mutation of the local economy devoted the primacy to fishery and related activities, because they generate more incomes than agriculture. Anyway, this regression of agriculture and market gardening does not mean an abandon of the activity. Market gardening is practiced in some way by the all the natives. For most fishermen, it permits to cover the food needs. Thus it is not an income generating for that category who practice it at random. This is certainly the reason why it was not listed as a productive secondary activity during the questionnaires. Nevertheless even if it is not a priority in terms of time spending on it, it is still a very largely practiced activity.

Market gardening employs a seasonal migrant manpower coming from the Fouladou, from Sine and other areas in Senegal. These migrants are paid in nature(one part of the production is for them), or in species. " The seasonal manpower cost about 25,000 to 75,000 F for the producers and each campaign, and the duration of the work is ranged from 3 to 7 months. (Tall Mountaga - The promotion of horticulture in Kayar- End of training Memoir ENEA -1995). The cultivated areas cover 389.3ha with 166.8 ha in Niayes soil and 222.5ha in Dior Soil.

3-2 Fishery

Fishery is largely the prevailing activity. With the related activities, it occupies the quasi-totality of the active population. The fishing activity itself use 55% of the active population for full time in the residents communities and 76% for migrants. The natural conditions are favorable to the practice of this activity. It is practiced in a long area of 35 to 40km. The presence of a marine pit and a deep channel near the beach is the reason of a calm zone facilitating the landings in safe

conditions. It is an abounded of fishes zone; which explains the attraction of other fishermen's community.

3-3 Processing

The development of fishing had many induced effects on the induced activities more or less related. The attraction it exercised on the Guet Ndarian community led to a mutation in the local practices. Processing is an activity where Guet Ndarian have a know-how. And it had an important development in Kayar .It is essentially practiced by women and it is the main activity of 33% of the female active population.

The processed products are very important. According to the study of the Japanese mission in 1995, Kayar produced 4,936 tons representing 30.6 % of the total production. Kayar was the 2nd big producer of the Great Coast. >

The results of our questionnaire cannot specify the incomes by types of activities (fishing, processing, wholesaling; nevertheless according to the data of the project PAFGC cited in the report of the Japanese mission <the highest income of a processor in Kayar in 1994 was 139,000Fcfa per month, the average income was 100,000Fcfa and the lowest was 25,00Fcfa>.

3-4 Other practiced activities

Wholesaling occupies about 10% of the active population for residents and 8% for migrants. The importance of these activities related to fishery give a place to the exercise of a second activity. Apart from wholesaling mainly practiced as a support activity, few active persons are doing secondary activities. 76% of persons interviewed have no secondary activity.

Obviously, for those who practice it, agriculture is the most probable secondary activity. 12.5% of interviewed are practiced it. This percentage is weak, due to the importance of the agro-market gardening in the zone. During the questionnaire only those who are practicing it as income generating activity declare it as a secondary activity, leaving aside he biggest part of those practice it for auto-consumption ends.

At last 11% of the persons interviewed have various other secondary activity. In fact the dynamism of the fishery sector in Kayar affected a lot the local economy by developing downstream the numerous other activities (baskets makers, hawkers, ice sellers, oil station managers, mechanics etc.).

We can consider that there is a dynamic process of the diversification of local economical activities. Our field observations and the various discussions we had in the zone, permit us to state this argument. We have chosen at the beginning to target the survey on the selected activities considered as the subjects of this study. The pertinence of this methodological choice is justified by the specific objectives of those who asked for this study.

Moreover it does not give us detailed information on the importance of the other diverse activities. which we think have taken a certain credit thanks to the increasing monetarization of the local economy in a process of urbanization. The small business, craft, production service and transportation etc. are the sectors employing manpower. It would be interesting to quantify the number of persons used in full time in these sectors.

3-5 Incomes levels

Presentation of the incomes levels for migrants and residents

Incomes brackets	% Migrants	% Residents
0-25.000	16.1	4.4
25-50,000	11.3	17.6
50-75,000	3.2	19.6
75-100,000	11.3	17.6
100-150,000	24.2	23.1
150,000 <	33.9	17.6

More than 58% of migrants earn 100,000F or more against 40.7% of residents. This is certainly link to the fishing equipment more important in the migrants communities. The incomes are also highest with the migrants. In the average brackets (between 50 and 100,000Fcfa), there are more residents 37.4% against 14.7% for migrants. On the contrary in the lowest incomes, the proportion are a bit higher for migrants (27.4%) than for residents (21%).

4 Groupings performances and access to credit problems

The exercises of the main activities we dealt with in this survey, are facing a certain number of difficulties we have listed in the results of the questionnaire on specific groupings of fishermen, processors and wholesalers.

4-1 Participation level of the GIEs

54% of residents interviewed belong to a GIE, against 3% for migrants. For these latter 35% are not interested, 15% say that they don't leave in Kayar, 17.5% don't trust GIEs, 15% consider that they are victims of a certain xenophobia and 15% are not informed.

4-2 Main results

For the residents, the main results collected are from GIEs and are for 18.6% for the purchase of a motor. 14% to acquire a credit, 14% of the sample sustain that GIEs favor a better organization of the work, and that they succeeded to buy many equipment.

The other results are the availability of preservation boxed (4.7%), of gill nets (2.3%), an action for the pricing (22.3%). 7% of the interviewed say that they haven't yet seen any results. For the migrants members of GIEs, the unique results is the purchase of boat engines (3 persons).

4-3 Main difficulties encounter

The main difficulties are those related to credit: 16.7% assess that the reimbursement periods are very short, 8% that the funds allocated are very weak. These difficulties go along with the luck of funding (8.3%) and the luck of materials(11%).

Other difficulties are: 2.8% talked about the problem of the absence or the insufficiency of the marketing places and 5.6% regret that there is no understanding between the members. 47.3%

of the interviewed have already received credit. 15.4% received their credit in Kayar and 27.5 % in Thies. For migrants 3 received a credit (1 in St. Louis and the two others did not answer the question.

As for the access to credit, 34.8% of migrants and 27.5% of residents consider it very difficult. 43% consider of residents and 44% of migrants consider that they have no problem to access to credit (for his question the abstention is 26% for residents and 21% for migrants).

For the difficulties to access to credit 3 main reasons have been listed:

- the luck of information: 15.2% for migrants and 4.4% for residents;
- the reimbursement difficulties: 15.2% of migrants and 14.3% of residents say that the interest rates are very high;
- the absence of local institutions for credit: 9% for migrants and 11% for residents.

4-4 Proposed Solutions

The main proposed solutions are :

- the creation of a local bank (or rather a local agency): 0.1% for migrants and 5.5% for residents;
- the decrease of the interest rate: 9.1% of migrants;
- the loans to migrants have been also listed (1% of migrants) and the simplification of procedures (3.3 % of residents).

Lastly 78.8 % of migrants wants to receive a credit in their migration site. 15.2% don't wish it and 6.1% did not answer to the question.

5 Migrants social insertion : the clashes related to cohabitation

The migration of Guet Ndarian fishermen dated long time ago. The participation level of migrants in the social and political structures of the village is an indicator of the local living condition of Kayar. Do they consider Kayar simply as a working place or a land to which they are linked without denying their strong relationships linking them to their original village? Do the Kayar people accept them? Is there any willingness to integrate the Guet Ndarian community? If it is true that the integration of Kayar inhabitants in the community life is very weak, that of migrants in the local organization is quite insignificant. Nevertheless, Kayar is very condensed in community organization.

5-1 Inventory of existing associations

- Cayar Yi (receipt No 5611 from /05/221987): this grouping is in animation on the cultural and sportive life in Kayar they are also leading development actions.
- Ndiaraf Mbor, Ndoye (receipt No from /12/29/19876): is working on support for the education in Kayar in relation with the students parents associations and academic authorities.
- The association of students parents : it is a support structure to academic authorities for a better management of the school.
- The village Development Committee created in 1996 is undertaking actions for the development of Kayar and the protection of environment and natural resources preservation.
- The Fishermen's Committee (receipt No. 8656/DEL/AS): it is a structure for the defense of fishermen's interests. It defines the operationally each fishermen in Kayar should respect.
- Producers' GIEs
- Dahiras
- Union of operators of artisanal fishing

5 - 2 Involvement in the community activities

The involvement of populations in the community life is globally weak, but that of migrants is quite null. Generally the mobilization of migrants in the community life is very weak. As for the religious organizations, the results of the questionnaires show that more than 70% of interviewed residents are members of a Dahira in Kayar against less than 10% for migrants. We can express the hypothesis that they prefer to join the religious associations in their original village.

As for the cultural and sportive associations and the organizations for development actions, 98% of migrants don't participate. The same proportion for the GIEs (98% of migrants). We can consider the low participation in social and cultural activities as normal; often many persons are interested and follow these activities but they don't join them actively

For the weak participation of migrants in the GIEs, we can consider that the cohabitation problems and the latent conflicts between the two communities are the main reasons: 15% of interviewed migrants declare that they are victims of xenephobia, 15% consider that they live somewhere else, 35% consider that they are not interested in local GIEs, and 17% do not trust the GIEs. On the contrary, a large majority of residents people interviewed are members of GIEs (58%).

The conflicts related to the exercise of the professional activities have marked the harmony and the internal cohesion of the organizational structures of the fishermen in Kayar. And this is obviously the reason why migrants are not participating to professional organizations like GIEs,

Nevertheless these conflicts do not affect the majority of the two communities: 76% of migrants and 82% of residents interviewed declare that they have no cohabitation problems. However, even if these opened conflicts are not numerous, there is a certain suspicion and a latent pressure climate perceptible during the discussion we have with some resource persons of the two communities. Besides the appreciation is rather insignificant. Only 50 of migrants have a positive judgment for natives.

These conflicts concern mainly fishermen. 24% of migrants and 18% of residents had cohabitation problems within the two communities. In the migrants community the conflicts concern mainly fishermen who are the professional group the most badly judged (22%). This rate is lower for native wholesalers (12%) and quite insignificant for processors(18%).

For resident these conflicts concern mainly migrant fishermen (17%). Whereas these conflicts do not occur at all with migrant processors and wholesalers (1%). Thus the conflicts between the two communities occur only in the fishing activities.

The main reproach made towards the migrants is the use of gill nets in some forbidden zones because of the destruction of sea resources. Some fisher men consider that the type of fishing practice by Migrant contribute to impoverish the sea.

The migrants on the contrary, consider that there is a jealousy explained by the fact that they have a better master of the fishing tectonics. And they feel frustrated for the regulation on fishing zones limitations that intends to move them away from the abundant zones whereas natives are taking profit of that situation. Thus, they feel victims of a certain xenephobia.

Moreover the creation of the fishing committee contributed a lot to solve these conflicts, and the fishing activities is now more organized in Kayar. Some regulations have been approved and they apply to all fishing communities (even if some their impartiality does not convince some migrants.

5 - 3 The fishing committee: a social regulation body, an association for the defense of fishermen's interests.

This association has about 60 active members gathered in the internal body and are responsible of the direction of the activities coordination. It has a real autonomy and a mobilisation and organization capacity for the fishermen

On the contrary of the other fishermen's organizations intervening in Kayar and that are all a branch of national structures such as (CNPS, FENAGIE-peche). The fishing Committee is a local organization of fishermen created by their own initiative and has the following subjective:

- the defense the particular and general and general interests of its members;
- implement all the proper means to facilitate or develop the economical activities of its members;
- better or increase the results of this activity;
- create and maintain the understanding, solidarity and assistance relationships in case of
  - boats in losses
  - boats destroyed after shipwrecks
  - functional engines or losses on sea
  - encourage and; each all actions intended to the social emancipation of fishermen members of the committee.

The first reason of its creation is linked to the fishermen's need to organize themselves., to be constituted to a pressure strength to face the low process imposed by the wholesalers. This would mean that the offer on the Kayar market should be more organized, and that the landed quantities would be more regulated so that the prevailing prices will be maintained at a satisfactory level for the fishermen. This regulation objective of the offer would also mean that the whole community(residents and migrants) should adopt these rules.

Two key measures had been adopted:

- the rationing of the catches
- the limitation of fishing zones

For the first measures two main regulations have been adopted

- for each boat, only one fishing operation is possible per day
- the maximal quantity authorized is 3 boxes of 15 kg each per boat and per operation for any sea products

As for the limitation of fishing zones , the continental are has been divided into 2 zones:

- one area exclusively reserved for line fishing. It is the rocky zone, more abundant with fishes and where we can find high value fishes destined to exportation.
- the zone for gill nets fishing

Supervision brigades organize the keeping to care about the respect of the functioning of these regulations. Sanctions will be imposed to offenders by paying a fine which amount is fixed according to the degree of the fault. It can be 30,000 or 50,000Fcfa. Persistent offenders will see their fishing material confiscated at the Police Station. The sanctions can go up to the suspension of the fishing activity of the offender.

Generally the regulations are respected by the fishermen. The measures that permitted a better control of the offer are certainly the consequences of the of the fish prices noticed from 1994. The mix composition of the directory staff the committee contributed a lot for the efficiency and pertinence within the fishermen. This branch has 14 members (7 from Kayar and 7 Guet Ndarians) .

We also notice that the fishing Committee is considered by the migrants as the first mean to regulate the conflicts between the communities (18.2%). Besides, development actions undertaken within the village and also within the of migrant original village contributed to its popularity. At the last inundation in St. Louis, the committee send an aid to the victims. The fishing committee is among the most efficient bodies.

For the realizations, we can list

- financial participation to the building of the Big Mosque
- participation to the on going building of a new mosque in Kayar
- funding of Human investment Day to clean the beach in Kayar
- rehabilitation of the Health Post in Kayar
- participation to the longing of the main road in Kayar

These development actions strengthen its popularity. The Fishing Committee by its various actions contributed to solve latent conflicts between the two communities. The adopted regulations in terms of catches rationing and fishing zones limitation are meeting the interests of the majority of fishermen, even if they did not receive the agreement of everybody.

This objective convergence of interest for the professional activity gathering these two communities is by far more important than subjective considerations, and rivalry relationships and xenophobia sentiments that characterize their cohabitation.

Certainly the participation of migrants in the local political life is weak: 65% of residents voted during the local elections against only % of migrants. Even if 97% of migrants declare their civil status in Kayar, 65% voted in St. Louis and 14% declare not to be part of the local life of Kayar.

This weak participation does not mean necessarily that they are willing to apart from the village life or that they exclude themselves to the development actions in Kayar. The improvement of the comfort level in Kayar profit to both communities as well as the improvement of working conditions is preoccupying all fishermen. Project on that sense would strengthen the support of everybody. This seems to confirm the results of the survey: 80% of residents with the involvement of the whole communities in the management of projects.

6 Needs and priorities

6 - 1 Needs and priorities of the village

The priority needs expressed by the populations correspond to the constraints we already listed in the part of the report on the space study of the village. The results of the survey show that the for the two communities (migrants and residents) the priority needs are the public lighting and the realization of that water supply network (66.7% and 51.7% of residents).

The public lighting problems has negatives consequences on the functioning of some activities as processing and fishing. The lack of lighting on the processing areas and on the landing is the source of the difficult working conditions at night and also bring security problems. And this affect the working sites as well as the interior of the village as we already state it.

The second priority expressed by the residents is about the cleaning up and the toilets corresponding to the third priority of the migrants.

In Kayar only few houses have latrines and the beach is used for human needs which causes sanitation problems. Some actions have been undertaken by the Village Development Committee CVD particularly. Some public toilets have been constructed along the beach but

they are not enough. Also CVD brigades are supervising the sanitation on the beach. Nevertheless we notice that despite these actions undertaken by the CVD and the Fishermen's Committee the bad sanitary condition is still a problem in Kayar.

A funding to support the realization of private toilets initiated by the CVD in relation to the city of Lorrient would contribute to lessen this phenomenon. Besides the CVD implemented a system of collection of garbage with 5 horse cars going across the village. The increase of the number of these horse cars would permit to increase the capacity of the collection and avoid the gathering of garbage.

For the migrant the second prorate is the land or plot problems. The study of the space occupation show the necessity to proceed to a more coherent reorganization negotiated with the populations in order to have a coherent local urban tissue. Particularly in the sub-districts along the beach or in the extension zone (near the dunes). This reorganization would permit to fit out the secondary and tertiary highway for an easy access to the interior districts and sub-districts.

The third priority expressed by both migrants and residents is the strengthening of health facilities. There is only one health post, which is not sufficient. Also as for the functioning of that structure, there are problems related to the insufficiency of the agents, a luck of equipment and the bad conditions of the rooms.

6-2 Priority action programs

(1) Electricity network
- strengthening and extension of the electricity network to cover all the village
- realization of the public lighting

(2) Water supply network
- realization of a potable water supply
- realization of public fountains managed by private individuals . This distribution system should cover all the sub-districts.

(3) Cleaning up
- strengthen the local system of garbage collection by increasing the number of horse cars
- find a new funding for the private latrines program in relation with the local associations. namely the CVD
- realization of new public toilets on the beach in relation with the associations (CVD).

(4) Rehabilitation and improvement of the transportation network
- develop the secondary and tertiary roads to facilitate the internal movements
- rehabilitation of the main access road to secure and facilitate the connection to the big regional and national axes

We notice also that in the field of development actions, some village associations have joined. In terms of impact on the village life and dynamics of community actions, the CVD (with the Fishing Committee) is obviously the most important body.

6-3 the CVD: a first rank partner.

Created on July 10th 1996, the association has the following objectives;
- gather the members of the same ideal and create among them harmonious and solidarity relationships;
- contribute to the social emancipation and the civic training of the population;
- defend and promote the villageris interests;
- coordinate the social, economical and environmental development actions;
- contribute to the promotion of the integrated development of the villageris resources.

This associated is directed by a body composed of a president, a secretary general and a general treasurer. It is divided into 8 commissions each in charge of one sector of the socio-economical life of Kayar: fishery, fanning, market gardening, forestry, development plan, compost, toilets, credit and saving.

The impact of the CVD actions is important; it covers priority and various domains:

- fight against the Reforestation (supervision brigade for fraudulent tree cuttings);
- settlement of a local system for garages collection;
- construction of public toilets;
- construction of private latrines;
- implementation of a small credit system for the groupings.

The CVD works with a partnership network:

- the project Reseau 2000 for the branch Environment Protection;
- the CTL project for the preservation of the coast: dunes fixation and afforestation;
- the city of Lorrient for the Cleaning Up branch;
- AGETIP which funds the activity program of the CVD for an amount of 13,000,000 Fcfa.

6-4 Needs and priorities at the level of fishing operators

The most expressed needs is the increase of the financial means for the purchase of fishing equipment and materials: 40% of residents and 44 % of migrants. This need is related to the second priority: 16% of the interviewed claim the decrease of the intrants costs and the fishing material.

The second priority is the realization of a treatment and preservation plant. The realization of this plant would permit them to solve the marketing problem of the products, considered as the major difficulty related to the exercise of the activity (luck of issue for 10.7% of migrants, marketing problem for 8% of residents.

Besides, thanks to the preservation possible after the realization of this plant, the storage of a part of the production in case of abundance would permit the fishermen to maintain the prices at a satisfactory level. The electricity need particular on the processing area and the landing points have been also expressed (7% of residents). This would better the working conditions at night. Also the water supply need had been listed (4.55 of residents).

We must say that in Kayar, there are some fishing facilities:

- a wholesale center with an ice plant;
- two ice storage for preservation;
- a non developed processing sit;
- a drilling for the supply in water for the wholesale center and the fishery service.

A/ DISTRIBUTION OF ACTIVITIES IN KAYAR

A1/ MAIN ACTIVITY RESIDENTS / MIGRANTS

MAIN ACTIVITY	% RESIDENTS	% MIGRANTS
Fishermen	54.9	75.9
Processors	33	15.2
Wholesalers	9.9	7.6
Carpenter	-	1.5
Gasoline Distributor	1.1	-
Mechanics	1.1	-
TOTAL	100	100

A2/ SECONDARY ACTIVITY RESIDENTS / MIGRANTS

ACTIVITY SECONDARY	% RESIDENTS	% MIGRANTS
No secondary activity	76	87.3
Agriculture	12.5	1.5
Food service	-	4.8
Others	11.3	6.3
TOTAL	100	100

B/ INCOMES LEVELS AND CONSUMPTION EXPENSES

B1/ INCOMES LEVELS RESIDENTS / MIGRANTS

INCOMES BRACKETS (CFAfrancs)	% RESIDENTS	% MIGRANTS
0 - 25,000	16.1	4.4
25 - 50,000	11.3	17.6
50 - 75,000	03.2	19.6
75 - 100,000	11.3	17.6
100 - 150,000	24.2	23.1
150,000 <	33.9	17.6

B2/ CONSUMPTION EXPENSES RESIDENTS/MIGRANTS

TYPES OF EXPENSES	AVERAGE AMOUNT FOR RESIDENTS (Fcfa)	AVERAGE AMOUNT FOR MIGRANTS (Fcfa)
Expenses Consump. Expenses	77,523.26	98,827.59
Exp Housing	30,000	11,000
Exp. Leasures	15,942.67	12,180.85
Reimbursement credit	17,961.67	64,750
Exp. Religion	3,427.03	19,357.14
Exp. Children education	2,182.86	1,762.50
Exp. Family ceremonies	9,041.10	9,837.50
Other expenses	8,500	9,605.26
TOTAL (en francs)	164,578.59	227,320.84

C/ SAVING INCOMES AND TYPES

C1/ AMOUNT SAVING RESIDENTS / MIGRANTS

AMOUNT	% RESIDENTS	% MIGRANTS
1000 - 10,000	58.9	23.5
11 - 20,000	13.6	17.6
21 - 25,000	2.7	5.9
26 - 30,000	11	5.9
31 - 40,000	4.1	2
41 - 45,000	1.4	-
46 - 50,000	4.1	35.2
51 - 75,000	1.4	5.9
76 - 100,000	1.4	2
110,000	1.4	2
TOTAL	100	100

C2/ SAVINGS TYPE MIGRANTS / RESIDENTS

SAVINGS TYPE	% RESIDENTS	% MIGRANTS
Tontine	32.4	14
Bank	7.0	6
Mutual CrÈdit	14.1	-
Thesaurisation	26.8	58
Other savings	14	2
Others	18.3 (*1)	20 (*2)
TOTAL	100	

(*1) Gather two types of savings. We have 13,2% combining tontine et mutual credit 1 1,1% go to tontine et thesauration.

(*2) For combined types of savings. But for migrants we succeeded to have the detail of the distribution from the results of the survey

D/ LOCAL COMMUNITY LIFE IN KAYAR

D1/ PARTICIPATION LOCAL COMMUNITY LIFE (RESIDENTS/MIGRANTS)

ORGANIZATION TYPES		% RESIDENTS	% MIGRANTS
Groupings	Non members	41.6	98.5
	Members	58.4	1.6
Dahira	Non members	27.6	90.6
	Members	72.4	9.4
Association	Non membres	70.7	98.5
	Membres	29.3	1.5
G.I.E.	Non members	46.2	97
	Members	53.8	3

D2/ REASONS OF THE NON - PARTICIPATION TO G.I.E.

REASONS	BY RESIDENTS % (*1)	BY MIGRANTS % (*2)
Lack of information	2.5	15
Non interested	43.8	35
Too many problems	31.8	-
other reasons	-	15
Lack of confidence	-	17.5
Fear to reimbursement	-	2.5
Xénophobia	-	15

(*1) The answers concern only 16 heads of households on 91 interviewed
(*2) The answers concern only 40 heads of households on 66 interviewed

D3/ MAIN RESULTS OF THE G.I.Es

TYPES of acquisitions	NUMBERS OFBENEFICIAIRY RESIDENTS	NUMBERS OF BENEFICIAIRY MIGRANTS
None	03	-
Purchase of engine	08	-
preservation boxes	02	-
Funding credit	06	-
Better organization of the work	06	-
Action prices	01	-
Purchase of materials	05	-
Purchase of boat	-	03
Purchase of gills	01	-
Others	11	-

D4/ DIFFICULTIES ENCOUNTERED BY THE G.I.E.

TYPES OF DIFFICULTIES	% RESIDENTS	% MIGRANTS
No difficulty	33.3	-
Lack of information	-	32.3
Small amount of the loans	8.3	-
Short term reimbursement with high interest rate	16.7	32.3
Lack of funding Absence institution for credit	8.3	19.4
Lack of materiel	11.1	-
Absence of market	2.8	-
Slowness of setting up	2.8	-
Members misunderstanding	5.6	-
Others	11.2	6

JICA