Standard Summary Project Fiche

1. Basic Information
1.1 CRIS Number: 2003/005-026.07.01
   Twinning EE03-IB-AG-02

1.2 Title: Development of an IT System for administration of EAGGF Guarantee section Rural Development Plan (RDP) measures

1.3 Sector:
   Agriculture

1.4 Location:
   Estonia, Tartu

2. Objectives

2.1 Overall Objective(s):
   Efficient Implementation of RDP measures in Estonia

2.2 Project purpose:
   ARIB is ready to administrate EAGGF Guarantee section RDP measures under regulation 1257/1999.

2.3 Accession Partnership and NPAA priority

Accession Partnership
Agriculture
“Reinforce the administrative structures needed for the design, implementation, management, monitoring, control and evaluation upon accession of EC funded rural development programmes.

Up-grade the capacity of the agricultural administration and complete preparations for the enforcement and practical application of the management mechanisms of the Common Agricultural Policy, in particular the Integrated Administration and Control System and the Paying Agency.”

NPAA 2002-2003

7.3. Rural development policy

Administrative capacity

“By the end of 2003 Estonia will be administratively capable to implement the support measures of the EU and operate similar administration systems of support schemes.”
To achieve this objective the development of ARIB will be continued. ARIB is already now responsible for administration of national agricultural and rural development support schemes under the EU SAPARD programme. ARIB will become the implementing and paying of all support measures of the EU common agricultural policy and rural development support schemes. However, the capacity of ARIB for carrying out inspection has to be increased in terms of resources. The procedures of processing applications and control will have to be harmonised with regulations on structural funds.”

Regular Report 2002
Chapter 7 - Agriculture

Overall, Estonia has made good preparations in both implementing legislation and developing the required administrative capacity in the area of agriculture. In particular, the reorganisation of the Ministry of Agriculture carried out in 2000 and the strengthening of ARIB has proved to be effective. However, considerable efforts still need to be made,

The evaluation of management capacity and training levels of staff of ARIB is generally positive. However, ARIB faces an important challenge during 2002-2003 regarding /…/ transfer of SAPARD and national schemes to EAGGF-type schemes.

2.4 Contribution to Estonian National Development Plan

Reference to draft RDP

1. Introduction

Support measures co-financed by the European Agricultural Guidance and Guarantee Fund (EAGGF) are of particular importance in view of rural development. The rural development measures financed from the EAGGF Guarantee Section that Estonia plans to implement upon accession to the EU are the following:

- support to less-favoured areas and areas with environmental restrictions;
- agri-environmental support (mandatory);
- afforestation;
- support for semi-subsistence farming;
- compliance with EU standards;
- Technical aid (supportive measure).
11 COMPETENT AUTHORITIES AND RESPONSIBLE BODIES

The agencies responsible for the implementation of the Rural Development Plan on the level of the state are the following.

The Ministry of Agriculture is responsible for coordinating the implementation of the Common Agricultural Policy in the Republic of Estonia, acting as the competent authority. The competent authority is also responsible for the exchange of information between the European Commission and the Republic of Estonia and for accreditation of the paying agency. The Ministry of Agriculture also performs the duties of the certifying body.

The Agricultural Registers and Information Board (ARIB) implements all the measures of the CAP and acts as the paying agency, having been previously accredited by the competent authority.

2.5 Cross Border Impact

Not applicable.

3. Description

3.1 Background and justification:

By the beginning of 2004 Estonia has to be administratively capable to implement the support measures of the EU and operate similar administration systems of support schemes.

According to the SPD for the programming period 2003 – 2006 Estonia is going to implement 13 measures of the 22 existing in EU. The whole territory of Estonia will be under the Objective 1. Five measures planned in the draft Rural Development Plan (RDP) have to be administered according to regulation 1257/1999.

To achieve this objective the development of ARIB has to be continued. ARIB is already now responsible for administration of national agricultural and rural development support schemes and making payments under the EU SAPARD programme. ARIB will become the Paying Agency of all support measures of the EU common agricultural policy and rural development support schemes.

Therefore, the procedures for processing applications and control have to be harmonised with regulations on structural funds. Also necessary software for the administration of rural development measures has to be developed to meet the administrative and monitoring needs and the staff of ARIB needs to be trained to be able to administrate the measures. A Twinning light component is foreseen to ensure a quality implementation of the rural development plan through new software application in ARIB.

For administration of SAPARD measures, at present only the accounting and payment part (Axapta) is computerised. The administration of
applications up to this level is made manually, it is not computerised, creating the risk for mistakes and ineffective usage of labour. This risk concerning manual administration of RDP measures is also reflected in the feasibility study (see annex 5 Table 1.).

As seen from the table 1 of the feasibility study the development of manual system would cost around 100 000 EUR, maintenance costs around 200 000 EUR yearly and reporting around 75 000 EUR yearly. An IACS based system development would cost 500 000 EUR (i.e 400 000 more), with a yearly implementation cost of around 100 000 EUR (i.e 100 000 EUR less) and reporting costs would be 20 000 EUR (i.e 55 000 EUR less). In total the IACS based system maintenance costs would be yearly 155 000 EUR lower and therefore the higher development costs would be covered in 3 years.

If the software development can only be carried out by May 2005 the manual system is additionally needed to administrate the RDP measures. The development and maintenance costs for manual system consists mainly of planning, building and running of manual process for RDP measures. The maintenance of manual system demands more labour, because managing applications, payments and controls will be much more labour intensive as in computerised systems. Especially cross-checks and reporting will be much more difficult to carry-out. In the feasibility study it has been estimated that the staff resources needed would be twice in the manual system comparing to the IACS based system.

Regulation 445/2002, Articles 58-60 directly suggest Member States to use IACS system developed under regulation 3508/92. Doing that manually would create high risk for mistakes and it is not possible for running 100% cross checks in case of land parcel register.

Therefore even if the manual system has to be developed temporarily, it is still cost-benefit to develop IACS based system due to the fact that the maintenance costs are yearly 155 000 EUR lower and development of manual system costs only 100 000 EUR.

Under regulation EC No.1257/1999 Estonia is going to implement the following rural development measures:

- Agri-environment (compulsory)
- Less favoured areas
- Afforestation
- Semi-subsistence farming
- Meeting of EU standards

A Feasibility study was carried out in frame of PPTMF\(^1\) to evaluate the existing situation on administration of RDP measures, to define the strategy for the development and assess the costs for software

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\(^1\) PPTMF - Project preparation, training and management facility
development. The study is annexed to this fiche as annex 5. The main conclusions of the study were:

- **Planning of the RDP measures under regulation No. 1257/1999 is still unfinished in Estonia.**

- **The volumes of the five RDP measures (agri-environmental, LFA, afforestation, semi-subsistence farming, meeting of EU standards) are expected to be rather high.** *(see further clarifications under chapter 2. Description of the current system in feasibility study)*

- **To administrate the RDP measures, a software based on IACS is highly recommended.**

- **To develop the RDP measures to the IACS software, IT development project consisting of stages from specification to implementation is necessary.**

- **The estimated amount of costs to develop a software for RDP measures is around 500.000 euros.**

- **The development project has to take all standards and architectures used in ARIB into account.**

- **The project has to be co-ordinated very well with Phare 2002 project (development of IACS).**

- **Regarding a call for tender, a resource based tender is preferable.**

- **It is necessary that ARIB provides adequate amount of resources to the project.**

- **The project should start as soon as possible to be able to be ready in 2004.**

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**Software for the administration of rural development measures**

For the implementation of IACS the Estonian Ministry of Agriculture decided to ask the Finnish Ministry of Agriculture and Forestry for the possibility to get the Finnish system as a basis of IACS subsidy system. Currently the Finnish system is transferred to ARIB and running in a testing environment. Within the applied Phare 2002 Project 2002/000-579.05.03 *Development of Agricultural Information Management System* this software will be customized.

The Finnish software contains the basic elements (application handling, control, payments) to handle different kind of subsidy schemes for farmers. These basic software elements will also be utilised for the administration of rural development measures. To avoid overlapping the feasibility study experts identified different components and indicated under which project they will be dealt with (see feasibility study chapter 5). To ensure the effective monitoring of the activities twinning expertise is planned under this project.

The feasibility study also indicated, that the RDP measures differ greatly from one country to another and thus the specific part of Finnish software managing the Finnish RDP measure cannot directly be utilised in Estonia.
Therefore an additional software development for RDP measures is necessary.

Since the feasibility study proposes solutions for software development, the STE-s of the current project have to assess the proposed architecture and based on the feasibility study prepare the tender documentation for software development. To do that the STE-s have to be specialists on RDP measures administration, and not as much on IT.

Considering the nature of the project, no NGO-s were consulted during the project planning process. The project aims at institution building at the central government level and the NGO-s are not seen as directly benefiting or having a role in the project activities.

3.2 Linked activities:

3.2.1 Development of Agricultural Information Systems
(ES98/IB/AGR/01/1)

This project focused on establishing an efficient co-ordination structure for the overall agricultural information systems (EAA, FAN, MIS, IACS). It was the first project concerning development of the IACS system in Estonia.

The main objective of the IACS component was to advise Estonian experts on establishing the system according to EU requirements, especially on establishing support administration infrastructure and evaluating institutional capacities. The main focus was on creating a work plan for further activities.

- The total input of foreign expertise was approximately 350 days.
- Budget for the project was €500 000. (IACS approx. 20%)
- Project duration: June 1999 – June 2001

3.2.2 Development of Agricultural Support System Administration
(EE00/IB/AG-01)

This project was planned to be the main tool in assisting Estonia to develop an operational IACS system. Both twinning and investment components were included but at the time of preparing the project, the complete scope of the IACS system could not be envisaged. The partners were convinced that necessary IACS elements were already in place and needed more or less to be updated. This conviction was wrong, and therefore at the start of the twinning activities the experts referred to the small investment budget and they then defined more realistic requirements.

The main emphasis in this project is on specific expert advice on setting up the necessary management systems, developing written procedures and legislation. The main scope of the investment component was the
development of a land parcel identification system and purchasing the necessary equipment and licenses. Unfortunately, this does not cover the entire IACS requirements, therefore the new project is needed.

The total budget was € 700 000 for twinning and € 2 050 000 for investment (hardware, ortophotos, digitalisation) and the twinning covenant was signed in August 2001 for a duration of 18 months.

3.2.3 Development of Market Regulation System for Agriculture (ES2001/IB/OT/01)

The objective of the project is to establish a fully operational intervention system (covering plant, milk, meat production and processed goods) that can be implemented both from national funds and EU funds after accession.

The main project activities are directed towards ARIB and their common management provides the link to IACS. The total budget is € 530 000 for twinning and 1 480 000 for investment (analysing equipment, IT equipment, software development)

Twinning activities started in October 2002 and the duration of the project is 15 months. The twinning experts realised during the 1st quarter of twinning project that the investment component of the project is overambitious and the objectives cannot be achieved within the budget.

A new project proposal was therefore submitted under Phare 2003 based on a feasibility study embracing the development of the full system carried out in March 2003. This study identified all the investment needs for the market regulation IT system.

3.2.4 2002/000-579.05.03 Development of Agricultural Information System

The expected results of the project are:
(1) Installation of functioning Integrated Administration and Control System (IACS) for administering CAP direct support measures and its connections with agri-environment area based measures of regulation No. 1257/1999.
(2) Information system established for veterinary control purposes for the animal identification and movement control. Implementation time is 2003-2004. The budget is € 1.363.700 for twinning, € 1.800.000 for software development and € 217.300 for IT equipment.
The gap-analysis of different elements to be developed under both project is included in the feasibility study for development of system for administration of EAGGF under RDP. Table 2 indicates clearly, that the basis of development can be done in Phare 2002 project, but all specific parts related to the RDP measures in Estonia should be done in Phare 2003 project. (Annex 5, chapter 5 table 2. Gap analysis).

3.2.5 Development of Structural Funds electronic information system (applied from Phare 2003 programme).

The overall objective of the project is:
Sufficient capacity for the implementation of Structural Funds

The project purpose is:
Information system for the management and exchange of EU Structural Funds and Cohesion Fund data between EC and Estonia according to requirements of Council Regulation 1260/1999 - Articles 18(3)(e) and 34(1)(a) ready.

The project Development of Structural Funds electronic information system will not provide individual administration systems for managing the EAGGF Guarantee section and does not overlap with the current project.

3.3 Results:

Contract 1 - twinning light

1) Technical specification for software development tender prepared and training plans for IT systems implementation for the following measures:
   • Agri-environment
   • Less favoured areas
   • Afforestation
   • Semi-subsistence farming
   • Meeting of EU standards
2) Processing documentation developed
3) ARIB staff is able to administer the above mentioned 5 rural development measures.

Contract 2 – IT Audit

Contract 3 – software development

1) Software programmes procured and operational for administering rural development measures of regulation No. 1257/1999.

2) 50 software users in ARIB trained to use the software.

2 For the indicators of achievement see Annex 1.
3.4 Activities:

Contract 1:

**Twinning light (Phare € 88,330)** for 6 consecutive months
1) short-term expert and Project Leader (Phare € 48,710)
   Input 3 working months over 3 consecutive months
Tasks:
- Preparation of software procurement tender documentation
- Preparation and planning activities
- Coordination of software development process
- Specification of the following RDP measures:
  - Agri-environment
  - Afforestation
  - Meeting of EU standards
Profile:
- Experience in administration of rural development measures
- Experience of financial planning for Guarantee section RD measures
- Experience in project management
- Good English language skills and computer literacy required
- Experience in information systems development
- Previous Phare experience preferable

2) Short-term twinning expert (Phare € 17,170)
Input 1 working month over 3 consecutive months
Tasks:
- Specification of the following RDP measures:
  - Less favoured areas
  - Semi-subsistence farming
- Assisting in controlling RDP measures
- Consulting ARIB employees in control procedures
Profile:
- Experience in administration of RDP measures
- Experience of accounting and payment systems in RDP
- Experience in system analysis methodology
- Experience in specification
- Good English language skills and computer literacy required

3) Short-term twinning expert (Phare € 17,170)
Input 1 working month over 3 consecutive months
Tasks:
- Overall expertise of software customisation
Expertise in technical design of RDP measures
Training paying agency and contractor in technical design

Profile:
Experience in administration of rural development measures
Good knowledge and experience of technical design
Good English language skills and computer literacy required

Contract 2. – IT Audit (Phare € 20.000)
An IT Audit and needs assessment is performed on the basis of the relevant measure control plans, IT development plan and draft technical specifications for contract 3

Contract 3. – software development (Phare € 289.270, Estonia € 97 400)
1) Software development to administrate the following rural development measures (Phare € 289.270, Estonia € 82 400)
   • Agri-environment
   • Afforestation
   • Less favoured areas
   • Semi-subsistence farming
   • Meeting of EU standards

The feasibility study for the software development was carried out in March 2003 (see Annex 5). According to the feasibility study the following necessary components should be presented for the RDP measures:

   • Application administration system related specifically for agri-environmental applications
   • Control system related specifically for agri-environmental measures
   • Support calculation of agri-environmental measures
   • Operational reports related specifically to agri-environmental measures
   • Application administration system related specifically for LFA applications
   • Control system related specifically for LFA
   • Support calculation of LFA subsidy
   • Operational reports related specifically to LFA subsidy
   • Application administration system related specifically for afforestation applications
   • Control system related specifically for afforestation
   • Support calculation of afforestation
   • Operational reports related specifically to afforestation
   • Cross-checks between afforestation and land parcel identification system
   • Application administration system related specifically for semi-subsistence applications
   • Control system related specifically for semi-subsistence applications
   • Support calculation of semi-subsistence applications
Operational reports related specifically to semi-subsistence applications
Application administration system related specifically for the meeting of EU standards measures.
Control system related specifically for meeting of EU standards measures
Support calculation of meeting of EU standards measures
Operational reports related specifically to meeting of EU standards measures
Cross-checks between meeting of EU standards measures, land parcel identification system and animal register.

2) Training of 50 software users in ARIB (Estonia € 15,000).

3.5 Lessons learned:

Valuable lessons can be learnt from previous Phare Twinning projects on Rural Development (ES9621-02; ES9803.04.)

The Annual Assessment Report R/ES/AGR/99031 suggested that project activities should be implemented in a logical sequence and designed to optimise the benefits of the activities. All Phare activities in Ministry of Agriculture are in accordance with long-term priorities of Development Strategy for Estonian Agriculture.

On general management the last Interim Evaluation Report No. IE.EE.AGR.02.043 prepared by EMS Estonia stated the following recommendations:

Chapter 4 Recommendation 4.1.7 In relation to the overall management of Phare assistance in the agriculture sector the National Aid-Co-ordinator, the Ministry of Agriculture and the agencies underneath it are recommended to consider the following:

· The Ministry of Agriculture should introduce closer and more formal monitoring of all projects and alert the Ministry of Finance and the EC Delegation of any inconsistencies in their implementation. Immediate action should be taken, if necessary, to re-allocate funds within the project budget and within the Programme. The recommendation has been fully accepted.

· The Ministry of Agriculture and the Ministry of Finance should enforce the contingency of Phare assistance concerning co-operation of the agencies in the agriculture sector to ensure regular and efficient information exchange, prevent the misunderstandings and time loss. The co-operation between the agencies of agricultural sector is regulated in line with legislation. Still the more formal steering group procedure will be used for project monitoring. ARIB has been identified as paying agency of EAGGF and FIFG. There is general experience on running IT systems necessary for administration of support systems and it is good basis for further development. Still the experience of EU member states has proved to be a very good experience in development of new systems and therefore the importance of twinning activities and training shall not be underestimated.
The Ministry of Agriculture should review the existing system of Phare/EU assistance programming, management co-ordination and monitoring. The Ministry should take stronger ownership of the remaining Phare assistance to avoid critical slippage that may hinder Estonia’s progress towards meeting its accession negotiation commitments. More staff should be directly charged with these functions. The Phare co-ordinator needs a clear, written Terms of Reference from the Chancellor, which fully set out his remit. Concerning the Phare project management the lines of responsibilities are determined by official work descriptions in the Ministry of Agriculture. One person has been nominated to act as PO in the whole agricultural sector. Two additional persons were included in Phare team dealing with project management and communicating directly with project managers.

4. Institutional Framework

The Ministry of Agriculture will be the Estonian co-ordinator of the project. The direct beneficiary is the Agricultural Registers and Information Board (ARIB)

ARIB is an agency under the Ministry of Agriculture. The main tasks of ARIB are to administrate SAPARD and national agricultural subsidies, after accession to act as paying agency for EU direct payments, to keep the registers concerning agricultural and other databases, processing and analysing the data. ARIB is also responsible for the development of the Integrated Administration and Control System (IACS) and Market Regulations measures.

See also: http://eng.pria.ee/structure_and_tasks/
5. Detailed budget

<table>
<thead>
<tr>
<th>Contract 1</th>
<th>Twinning Light</th>
<th>Investment Support</th>
<th>Institution Building</th>
<th>Total Phare (=I+IB)</th>
<th>National Cofinancing</th>
<th>IFI</th>
<th>TOTAL</th>
</tr>
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<td>Expert 1 and PL</td>
<td>48 710</td>
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<td>Reserve (2,5% of twinning budget)</td>
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<td>2 530</td>
<td>2 530</td>
<td></td>
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</tbody>
</table>

| Contract 2 | IT Audit | 20 000 | 20 000 | 20 000 |

| Contract 3, Software development | 289 270 | 289 270 | 97 400 | 386 670 |
| Software for EAGGF | 289 270 | 289 270 | 82 400 | 371 670 |
| Training for software users | 15 000 | 15 000 |
| Total | 289 270 | 108 330 | 397 600 | 97 400 | 495 000 |

**National co-financing**

National co-financing will come from Estonian state-budget for 2004, the ARIB budget line for co-financing of foreign assistance projects.

<table>
<thead>
<tr>
<th>National co-financing</th>
<th>2004</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>State budget</td>
<td>97 400</td>
<td>97 400</td>
</tr>
<tr>
<td>Total national co-financing</td>
<td>97 400</td>
<td>97 400</td>
</tr>
</tbody>
</table>

The amounts for co-financing indicated in the table correspond to cash co-financing. In addition, in-kind contributions from the Estonian administration for effective implementation of the twinning light may be further detailed in the twinning Terms of references. The co-financing expenses will be monitored by the beneficiary and the NAO. For the earmarked co-finance, a clear and verifiable set of costs will be provided. Flow and stock data on co-finance will be submitted quarterly for steering committees, twice a year to the Sector Monitoring Working Group. The beneficiary, together with the NAO commits to sound financial management and financial control.

In 2004 national joint co-financing in amount of € 82 400 is foreseen for software programming and € 15.000 EUR for training the users.
6. Implementation Arrangements

6.1 Implementing Agency

The CFCU of the Ministry of Finance is the Implementing Agency responsible for tendering, contracting and payments. Responsibility for the technical preparation, implementation and control will remain with the recipient institution.

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Ministry of Agriculture will be responsible for the overall co-ordination of this project and ARIB will be responsible for implementation (the software procured under the project will remain the property of ARIB).

A Steering Committee consisting of participants of all the relevant institutions will be set up to oversee the project implementation. The Committee will meet quarterly and it will include the representatives of ARIB, Ministry of Agriculture, the EC Delegation in Tallinn and the Ministry of Finance. Where possible the same persons will be involved who also belong to IACS 2002 project steering committee. The reports of the steering committees will be made available to both committees.

Contact persons in ARIB are:

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6.3. Twinning

Contact persons for twinning light will be:

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6.4 Non-standard aspects

The project consists of twinning and investment components. For investment component Phare contracting procedures are strictly followed. For twinning component Twinning Manual rules apply.

6.5 Contracts

The expected number of contracts is 3.
Contract 1: Twinning. Phare € 88.330,
Contract 2: IT Audit, Phare € 20.000
Contract 3: Software development Phare € 289.270 and Estonian co-financing € 97 400)

7 Implementation Schedule

7.1 Start of tendering/call for proposals
   − Call for proposals: July 2003

7.2 Start of project activity
   − Start of project activity: Oct. 2003

7.3 Project Completion
   − Project completion: May 2005

8 Equal Opportunity

During the implementation of the project there will be no discrimination on the grounds of race, sex, sexual orientation, mother tongue, religion, political or other opinion, national or social origin, birth or other status.
Equal opportunities for women, men and minorities will be ensured by the Steering Committee during the implementation of the project. The Estonian laws and regulations concerning the equal opportunities for women, men and minorities will strictly be followed. Equal opportunity for men and women to participate in the project will be measured by recording the experts and consultants employed.

9 Environment

No influence to the environment. If it exists then through the investments made by farmers only will improve the environmental situation.

10 Rates of return

The software to be developed within the project for the administration of Rural Development measures. Return is in indirect form.

11 Investment criteria

11.1 Catalytic effect:
Without Phare support Estonia will not be able to build up institutionally and technically well-organised Paying Agency responsible for administration of EAGGF fund at the moment of accession.

11.2 Cofinancing:
Phare funds will be supplemented by Estonian state- budget funds in the total amount € 97 400

11.3 Additionality:
Not applicable as ARIB is state institution and no private investments are foreseen.

11.4 Project readiness and Size:
The Feasibility study was carried out in March 2003 (see Annex 5). The tender documentation for equipment will be prepared by the twinning light experts by January 2004.

11.5 Sustainability:
The project will be sustainable, as Estonia has declared its commitment to the accession process to the EU. Ministry of Agriculture on behalf of Estonian Government will guarantee financial sustainability and will cover future maintenance and operation costs.

11.6 Compliance with state aids provisions
State aid is regulated by Estonian Competition Law, which is harmonised and in
compliance with European Union regulations. All state aid provisions deriving from the Estonian Competition Law will strictly be followed during the implementation of the project.

11.7 Contribution to National Development Plan
   Not applicable

12 Conditionality and sequencing

Conditionalities

The implementation of contract 3 – software development – is conditional upon the following:

1. Agreement on the identification of the RDP measures by the Commission
2. Control plans developed for RDP measures before an IT audit is launched.
3. IT development plan and technical specifications developed before an IT audit is launched
4. An independent IT audit (contract 2) and needs analysis for the investment component will be performed and approved by the EC Delegation before the launch of the tender for the investment.
5. The final budget for contract 3 will be revised according to its results. Any additional cost needed to reach the expected results of the current project, that might result from such an audit will be borne by the national budget. The fiche will be revised as appropriate and evidence of co-financing shown before implementation of contract 3.
6. Before the tender for the software component can be launched, verification will be provided that the staffing level of ARIB has reached a sufficient level (current plan: 256 staff) and that 5 additional persons required to directly manage RDP measures as recommended by the feasibility have been recruited.

Sequencing

The feasibility study has been done in frame of PPTMF in March 2003 (see Annex 5).

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The final agreement on the measures to be implemented under RDP has to be reached before project implementation.

The preparation of software procurement tender documentation is planned under twinning. This will be the first task for twinning experts and they shall finish that by January 2004 when software tendering shall be launched.

Ex-ante “audit” followed by a possible budgetary revision together with Twining experts by January 2004.

**ANNEXES TO PROJECT FICHE**

1. ANNEX 1: Logical framework matrix in standard format (compulsory)
2. ANNEX 2: Detailed implementation chart (compulsory)
3. ANNEX 3: Contracting and disbursement schedule by quarter for full duration of programme (including disbursement period) (compulsory)
4. ANNEX 4: Reference to Feasibility study
5. ANNEX 5: Feasibility study
### LOGICAL FRAMEWORK PLANNING MATRIX

**Project:**  “Development of IT System for administration of EAGGF Guarantee section RDP measures”

<table>
<thead>
<tr>
<th>Overall objective</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
</table>
| • Efficient implementation of RDP measures in Estonia | • ARIB ready for accreditation as paying agency by the end of 2005 | • Monitoring committee reports  
• Audit reports |

<table>
<thead>
<tr>
<th>Project purpose</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| ARIB is ready to administrate EAGGF Guarantee section RDP measures under regulation 1257/1999. | • The system is in compliance with relevant EU directives and regulations by May 2005 | • Project reports  
• Audit reports | In ARIB all necessary steps have been taken for accreditation |

<table>
<thead>
<tr>
<th>Results</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| **Contract 1**  
1) Technical specification for software development tender prepared and training plans for IT systems implementation for the following measures: | • Elaborated tender documents by January 1st, 2003  
• 15 persons trained in ARIB in | • Project reports  
• ARIB IT audit reports | |

| | Contracting period expires: | Disbursement period expires: |
| | 30.11.2005 | 30.11.2006 |

**Total budget:** 495 000  
**Phare budget:** 397 600
- Agri-environment
- Afforestation
- Less favoured areas
- Semi-subsistence farming
- Meeting of EU standards

2) Processing documentation developed
3)

3) ARIB staff is able to administer the above mentioned 5 rural development measures.

**Contract 2**
1) Software programmes procured and operational for administering rural development measures of regulation No. 1257/1999.

2) 50 users in ARIB trained to use the software.

<table>
<thead>
<tr>
<th>Administration of the following RDP measures by April 2004:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Agri-environment</td>
</tr>
<tr>
<td>• Less-favoured areas</td>
</tr>
<tr>
<td>• Afforestation</td>
</tr>
<tr>
<td>• Semi-subsistence farming</td>
</tr>
<tr>
<td>• Meeting EU standards</td>
</tr>
</tbody>
</table>

- Necessary IT programmes installed and operational by the end of 2004
- Software functional at ARIB by March 2005
- Software programmes operational and 50 people in ARIB ready to use programmes in May 2005
### Activities

**Contract 1**
- Preparing the software tender documentation
- Specification of RDP measures
- Assisting in controlling RDP measures
- Overall expertise of software customisation
- Assisting in technical design and software customisation of RDP
- Consulting ARIB employees

**Contract 2**
- IT audit

**Contract 3.**
1) Software development to administrate the following rural development measures
   - Agri-environment
   - Less favoured areas
   - Afforestation
   - Semi-subsistence farming
   - Meeting of EU standards
2) Training of 50 software users in ARIB (€ 15 000)

### Means

<table>
<thead>
<tr>
<th>Contract 1:</th>
<th>Phare Contract 1</th>
<th>Estonia Contract 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twinning light</td>
<td>48 710</td>
<td></td>
</tr>
<tr>
<td>Expert 1 - 3 working months over 3 consecutive months</td>
<td>17 170</td>
<td></td>
</tr>
<tr>
<td>Expert 2 - 1 working month over 3 consecutive months</td>
<td>17 170</td>
<td></td>
</tr>
<tr>
<td>Expert 3 - 1 working month over 3 consecutive months</td>
<td>20 000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audit Reserve</th>
<th>IT audit Contract 3:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.750</td>
<td>2.530</td>
</tr>
<tr>
<td>20 000</td>
<td>Development of software (one tender including all components)</td>
</tr>
<tr>
<td>289 270</td>
<td>97 400</td>
</tr>
</tbody>
</table>

### Cost (€)

<table>
<thead>
<tr>
<th>Phare Contract 1</th>
<th>Estonia Contract 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>48 710</td>
<td></td>
</tr>
<tr>
<td>17 170</td>
<td></td>
</tr>
<tr>
<td>17 170</td>
<td></td>
</tr>
<tr>
<td>20 000</td>
<td></td>
</tr>
</tbody>
</table>

### Assumptions
- There is necessary equipment to run the programs in ARIB
- Necessary human resources in ARIB
- Tender documentation is prepared in cooperation with short term experts
- The project has to be coordinated with Phare 2002 project (development of IACS).
- Software ready to run
Preconditions
- Control plans developed for RDP measures by the end of 2003 by STE-s
- An independent IT audit and needs analysis for the investment component will be performed and approved by the EC Delegation before the launch of the tender for the investment.
- The final budget for contract 2 will be revised according to its results. Any additional cost needed to reach the expected results of the current project, that might result from such an audit will be borne by the national budget. The fiche will be revised as appropriate and evidence of co-financing shown before implementation of contract 2.
- Before the tender for the software component can be launched, verification will be provided that the staffing level of ARIB has reached a sufficient level (current plan: 256 staff) and that 5 additional persons required to directly manage RDP measures as recommended by the feasibility have been recruited.
### ANNEX 2  TIME IMPLEMENTATION CHART

**Project No:**

**Project Title:** Development of IT System for administration of EAGGF Guarantee section RDP measures

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Contract 1</strong> Twinning light</td>
<td>T T T T</td>
<td>I I I I</td>
<td>I I I I</td>
</tr>
<tr>
<td><strong>Contract 2 IT audit</strong></td>
<td>T T T C</td>
<td>I I</td>
<td></td>
</tr>
<tr>
<td><strong>2. Contract 3 – Software development</strong></td>
<td></td>
<td>T T T T T T T</td>
<td>T C</td>
</tr>
</tbody>
</table>

- T – tendering; C – contracting; I – implementation; A - external audit and control
ANNEX 3  CONTRACTING AND DISBURSEMENT SCHEDULE

Project No: 
Project Title: Development of IT System for administration of EAGGF Guarantee section RDP measures

CUMULATIVE CONTRACTING SCHEDULE*

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31.03</td>
<td>30.06</td>
<td>30.09</td>
</tr>
<tr>
<td>Contract 2 IT audit</td>
<td>20 000</td>
<td>20 000</td>
<td>20 000</td>
</tr>
<tr>
<td>Contract 3 (software development)</td>
<td>289 270</td>
<td>289 270</td>
<td>289 270</td>
</tr>
<tr>
<td>TOTAL</td>
<td>108 330</td>
<td>108 330</td>
<td>108 330</td>
</tr>
</tbody>
</table>

CUMULATIVE DISBURSEMENT SCHEDULE*

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31.03</td>
<td>30.06</td>
<td>30.09</td>
</tr>
<tr>
<td>Contract 1 (Twinning light)</td>
<td>52 000</td>
<td>88 330</td>
<td>88 330</td>
</tr>
<tr>
<td>Contract 2 IT audit</td>
<td></td>
<td></td>
<td>20 000</td>
</tr>
<tr>
<td>-------------------</td>
<td>---</td>
<td>---</td>
<td>--------</td>
</tr>
<tr>
<td>Contract 3 Software</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>72 000</td>
</tr>
</tbody>
</table>
REFERENCE TO FEASIBILITY /PRE-FEASIBILITY STUDIES

The pre-feasibility study was prepared under the 2002/000-266.01.01 PPTMF (Feasibility Study for Phare 2002 project “Development of System for administration of EAGGF measures under RDP”). The study was submitted on 21st March 2003 and the conclusions and recommendations were considered in completing of the current project fiche. The study is included to the current fiche as annex (Annex 5).
FEASIBILITY STUDY FOR DEVELOPMENT OF SYSTEM FOR ADMINISTRATION OF EAGGF UNDER RDP

Phare Project Preparation,
Training and Management Facility
2002/000-266.01.01

<table>
<thead>
<tr>
<th>STATUS</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written by:</td>
<td>Sauli Sonkkila and Jussi Tuumi</td>
</tr>
<tr>
<td>Number of version:</td>
<td>0.1</td>
</tr>
</tbody>
</table>
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1 INTRODUCTION 2
  1.1 BACKGROUND OF THE STUDY 2
  1.2 OBJECTIVE OF THE STUDY 3
  1.3 METHOD OF THE STUDY AND STRUCTURE OF THE REPORT 3

2 DESCRIPTION OF THE CURRENT SITUATION 3

3 ANALYSIS FOR ALTERNATIVE WAYS TO MANAGE THE RDP MEASURES 4

4 DEVELOPMENT REQUIREMENTS 6

5 GAP ANALYSIS BETWEEN EXISTING SITUATION AND DEVELOPMENT REQUIREMENTS 7

6 STRATEGY OF DEVELOPMENT OF SOFTWARE FOR RDP MEASURES 10
  6.1 APPLICATION ARCHITECTURE 10
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7 ASSESSMENT OF COSTS FOR DEVELOPMENT 13

8 PROPOSALS OF CHANGES TO THE 2003 PROJECT FICHE 13

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APPENDICES

ANNEX 1: General architecture of the IACS system in Estonia
1 INTRODUCTION

1.1 Background of the study

The whole rural development legislation of the European Union will come into force in Estonia at the moment of accession. At the present moment the main aim is to strengthen the administrative capacity for implementation of EU rural development support measures at the moment of accession.

Administration of the support measures is complex and the agricultural sector must be able to implement the necessary support measures according to the EU regulations. To meet this need it is necessary to develop administrative management information systems supported by appropriate IT structures.

By the beginning of 2004 Estonia has to be administratively capable to implement the support measures of the EU and operate similar administration systems of support schemes.

Accordingly to the SPD and Rural Development Plan (RDP) for the programming period 2003–2006 Estonia is going to implement 13 rural development measures of the 22 existing in EU. Presumably the whole territory of Estonia will be under the Objective 1, which means that 8 measures from 13 have to be implemented according to regulation No 1260/1999 and 5 according to regulation 1257/1999. The five measures will be implemented under the FIFG according to regulation of 1263/1999. Current project is concentrating on 1257/1999 measures.

To achieve this objective the development of ARIB has to be continued. ARIB is already now responsible for administration of national agricultural and rural development support schemes and making payments under the EU SAPARD programme. ARIB will become the implementing body and Paying Agency of all support measures of the EU common agricultural policy and rural development support schemes.

Therefore procedures for processing applications and control will have to be harmonised with regulations on structural funds (Relevant legislations: 445/2002, specifically articles 58, 59, 60 that indicate the use of IACS methods on area or animal based rural development measures. Also the requirements of 1663/95, which settle the rules for paying agencies and 438/2001 on implementation of 1260/1999). Also software for the administration of rural development measures has to be developed.

Software for administration of the EAGGF Guidance section rural development measures and FIFG measures will be developed under the IT project for SF funds applied by the Ministry of Finance under Phare 2003⁴.

Under regulation EC No.1257/1999 Estonia is going to implement the next rural development measures:

⁴ We support the approach to keep the development RDP measures 1257/1999 and the EAGGF Guidance section rural development measures and FIFG measures as two different projects. The RDP measures under 1257/1999 are very different than the other RDP measures and they have to be linked to the IACS.
For the implementation of the Integrated administration and control system (IACS) the Estonian Ministry of Agriculture decided to ask the Finnish Ministry of Agriculture and Forestry for the possibility to get the Finnish system as a basis of their IACS subsidy system. Currently the Finnish system is transferred to ARIB and running there in a testing environment.

Within the applied Phare 2002 Project 2002/000-579.05.03 Development of Agricultural Information Management System this software will be customised.

The study was carried out between 18<sup>th</sup> and 21<sup>th</sup> March 2003.

1.2 Objective of the study

The general purpose of this study was to assess the best way to administrate the RDP measures under regulation No. 1257/1999 in Estonia. The work should take into account the existing situation in ARIB and planned software development projects. In a ToR of this study, the immediately objectives of this work were:
- Evaluation of existing software development situation in ARIB
- Define the strategy for development of software for administration of RDP measures
- Assess the costs for the development of the software

1.3 Method of the study and structure of the report

The method applied to find out the current situation was based on interviews, reports from existing and previous Phare projects and working papers prepared in the MoA and ARIB. After this, analyses of three possible options were done. On the basis of this analysis, the development requirements were assessed on the basis of the most preferable alternative. In addition, a gap analysis was done to evaluate missing components and necessary projects to develop the components. Chapter 6 considered some development strategy issues. After this, the development costs of the system were assessed. Finally, some proposals to the 2003 project Fiche were suggested on the basis of this study.

2 DESCRIPTION OF THE CURRENT SITUATION

Currently there are no software systems in Estonia to administrate RDP measures under regulation No. 1257/1999. The planning of the content of the five RDP measures is still under
way in Estonia. Therefore, the process of managing the measures in administration was not yet clear during the time of the study.

Generally speaking, the RDP measures under regulation No. 1257/1999 can be quite laborious to administrate as they can contain several different measures and sub-measures. Each measure and sub-measure should be administrated and controlled by the IACS\textsuperscript{5}. Also the reporting requirements to the EU and for national purpose are quite a massive.

The most complicated measures to administrate and to build the software are the agri-environmental measures. Currently Estonian Ministry of Agriculture is planning to have a two-level agri-environmental program with optional sub-measures. Most of the measures in the agri-environmental scheme will be area based, but there will also be animal based measures and measures based on the other issues than areas or animals. It has been estimated that around 50\% of farms in Estonia might participate in the agri-environmental program during 2004-2006. During the time of this study, several implementation level issues were still open.

**The less-favoured area (LFA) support** will be paid on area based in some part of Estonia. A rough estimation was that 40\% of farms and 30\% of arable land could be under the LFA-scheme during 2004-2006. The actual rules for the LFA-program were still partly open during the time of this study.

**Afforestation** is planned to concern in Estonia only abandon land. The subsidy consist of support for investments (plants, work etc.). The potential amount of land is almost 40\% of the total arable land but the estimation for the first program period is around 1\% of the land. Thus, the volume of this measure may be rather low in the first program period. The implementation issues regarding the measure were partly open during this study.

**Semi-subsistence farming** measure is a new measure intended to the candidate countries. It will be paid for a farm level. It has been estimated that almost 80\% of farms in Estonia are eligible for this measure during 2004-2006. The implementation issues regarding the measure were partly open during this study.

**Meeting of EU standards** measure is a new measure intended to the candidate countries. It will be paid for a farm level. The plan is to implement this to animal farms regarding manure cistern investments. It has been estimated that almost 80\% of farms in Estonia are be eligible for this measure during 2004-2006. The implementation issues regarding the measure were partly open during this study.

### 3 ANALYSIS FOR ALTERNATIVE WAYS TO MANAGE THE RDP MEASURES

Three major options to manage the RDP measures under 1257/1999 were identified and taken to the analysis:
1. Manual system
2. Software system based on IACS

\textsuperscript{5} See Regulation 1750/1999, Article 47.
3. Separate RDP software system

**Manual system** here can be described as a similar kind of system as used to manage Sapard subsidises in ARIB. Thus the process is manual until the payment and accounting part, which would be computerised. Some excel sheets may be utilised as a help of the processing the applications.

**Software system based on IACS** would rely as much as possible on the common components and registers of the IACS system (see ANNEX 1). The missing parts and components would have to be build on.

**Separate RDP software system** would not utilise the common components of the IACS system except the payment and accounting part of the system. It would however to utilise the common registers so much as necessary to enable cross-checks between IACS and separate RDP system.

Table 1 presents an analysis of the three options presented above. Because part of the criteria are qualitative, the qualitative criteria are transformed to quantitative by scale 1-5 (very good – very bad). In addition, the weights for each criteria are used to differentiate the relative importance between the criteria. The weight used here can easily be altered if one wants to weight the criteria differently.

Table 1. Analysis of the alternative options to manage RDP measures under 1257/1999

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weight</th>
<th>Manual</th>
<th>IACS based</th>
<th>Separate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development costs</td>
<td>0.25</td>
<td>1 (100.000 euros)</td>
<td>3 (500.000 euros)</td>
<td>5 (1.5 million euros)</td>
</tr>
<tr>
<td>Yearly maintenance and running costs</td>
<td>0.15</td>
<td>3 (200.000 euros)</td>
<td>1 (100.000 euros)</td>
<td>2 (150.000 euros)</td>
</tr>
<tr>
<td>Accordance with EU requirements (cross-checks, x-file reporting, common client and farm register)</td>
<td>0.20</td>
<td>3 (not fully)</td>
<td>1 (yes)</td>
<td>1 (yes)</td>
</tr>
<tr>
<td>Reliability, risk for mistakes</td>
<td>0.30</td>
<td>5 (very big)</td>
<td>2 (low)</td>
<td>3 (quite low)</td>
</tr>
<tr>
<td>Yearly reporting costs</td>
<td>0.10</td>
<td>4 (75.000 euros)</td>
<td>2 (20.000 euros)</td>
<td>2 (20.000 euros)</td>
</tr>
<tr>
<td><strong>TOTAL points:</strong></td>
<td>1.00</td>
<td>3.20</td>
<td>1.90</td>
<td>2.85</td>
</tr>
</tbody>
</table>

The manual system would be cheaper to build up, but the running costs of the system would be more expensive and a risk for loosing money due to the errors would be high. Even though the
volumes would be greatly lower than expected, they will be in a level where a computerised system is preferable. An information has to be stored, processed and combined concerning the whole program period.

When comparing the two other options, one has to keep in mind that the RDP measures have to be administrated via the IACS and therefore the system should be build as close as possible to the IACS software system. To build a very separate system for RDP measures would make it difficult to carry-out cross-checks. In addition, a separate system would be much more expensive to build than a system based on common components and registers.

On the basis of the analysis, the second option (software system based on IACS) is the most preferable alternative and thus the further analysis of this study is based on choice of this alternative.

4 DEVELOPMENT REQUIREMENTS

On the basis of analysis, the 1257/1999 measures to be paid from the EAGGF guarantee section should to be based on IACS system developed in the Phare 2002 Project 2002/000-579.05.03. The IACS system in Estonia consists of several components. The general level architecture of the IACS system is presented in ANNEX 1.

As the RDP measures differ greatly from one country to another, the specific part of the Finnish software managing the Finnish RDP measures cannot be utilised in Estonia but has to be build in a information systems development project. In addition, some of the planned RDP measures in Estonia (semi-subsistance farming and meeting of EU standards) do not exist at all in the Finnish IACS software. A detail analysis of this is presented in Chapter 5.

The RDP measures system will lean on the standards and IT architectures used in ARIB. These issues are dealt with in Chapter 6.

The development project of the RDP measures will include specification, design, programming, testing and implementation of the system. As many major and huge amount of detail issues are currently open in the RDP program, it is not possible to specify the system at once but keep on specifying the system during the project and focusing little by little to the details. This requires flexible usage of resources and thus, a resource based tender is more preferable than a fixed tender.

The project of developing the RDP measures will be parallel to the IACS software development project. Thus, a very close co-operation between Phare 2002 project and Phare 2003 project is necessary. In addition, it is necessary for ARIB to provide enough resources to the Phare 2003 project. The estimation will be five persons. The major tasks of these persons will be participate in the project work, prepare the administration of the measures, specify the software system, steer the consults together with twinning component, test the system, educate the users of the system and implement the system.
The project should start as soon as possible because the system should be partly operational in the middle of 2004 and be able to pay the RDP subsidies before the end of 2004.

5 GAP ANALYSIS BETWEEN EXISTING SITUATION AND DEVELOPMENT REQUIREMENTS

On the basis of analysis performed in previous chapters, a gap analysis between existing situation and development requirements (necessary components) is presented for each RDP measure. After this, a division of work to develop the situation is done between Phare 2002 and Phare 2003 projects.

Table 2 indicates clearly, that the basis of development can be done in Phare 2002 project, but all specific parts related to the RDP measures in Estonia should be done in Phare 2003 project.

Table 2. Gap analysis

<table>
<thead>
<tr>
<th>Measure</th>
<th>Existing situation</th>
<th>Necessary components</th>
<th>Activities taken care by PHARE 2002⁶</th>
<th>Activities taken care by PHARE 2003⁷</th>
</tr>
</thead>
</table>
| Agri-environment   | There are no existing system for administrating of the planned agri-environmental measures. Current SAPARD management system cannot be utilised for the planned agri-environmental measures. | – Client and farm register  
– Application administration system  
– Control system for applications  
– Support calculation  
– Payment processing system  
– Posting system, X-file reporting system and deptors ledger  
– Accounting and payment system  
– User identification and rights system  
– Entry book | – Client and farm register  
– General application administration system  
– General control system for applications  
– Payment processing system  
– Posting system, X-file reporting system and deptors ledger  
– Interfaces to accounting and payment system  
– User identification and rights system  
– Entry book | Application administration system related specifically for agri-environmental applications  
Control system related specifically for agri-environmental measures  
Support calculation of agri-environmental measures  
Operational |

⁶ Development of Agricultural Information Management Systems.  
⁷ Development of System for administration of EAGGF Guarantee section RDP measures.
## Less-favoured area (LFA) subsidy

**There are no existing system for administrating of the planned LFA-measures.**

Current SAPARD management system cannot be utilised for the planned LFA-measures.

<table>
<thead>
<tr>
<th>System</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Client and farm register</td>
<td>- Client and farm register</td>
</tr>
<tr>
<td>- Application administration system</td>
<td>- General application administration system</td>
</tr>
<tr>
<td>- Control system for applications</td>
<td>- General control system for applications</td>
</tr>
<tr>
<td>- Support calculation</td>
<td>- Payment processing system</td>
</tr>
<tr>
<td>- Payment processing system</td>
<td>- Posting system, X-file reporting system and debtors ledger</td>
</tr>
<tr>
<td>- Posting system, X-file reporting system and debtors ledger</td>
<td>- Interfaces to accounting and payment system</td>
</tr>
<tr>
<td>- Accounting and payment system</td>
<td>- User identification and rights system</td>
</tr>
<tr>
<td>- User identification and rights system</td>
<td>- Entry book system</td>
</tr>
<tr>
<td>- Entry book system</td>
<td>- Land parcel identification system</td>
</tr>
<tr>
<td>- Interface to land parcel identification system</td>
<td>- Client and farm register</td>
</tr>
</tbody>
</table>

**Application administration system related specifically for LFA applications**

**Control system related specifically for LFA**

**Support calculation of LFA subsidy**

**Operational reports related specifically to LFA subsidy**

---

## Afforestation

**There are no existing system for administrating of the planned afforestation.**

Current SAPARD management system cannot be utilised for the planned afforestation.

<table>
<thead>
<tr>
<th>System</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Client and farm register</td>
<td>- Client and farm register</td>
</tr>
<tr>
<td>- Application administration system</td>
<td>- General application administration system</td>
</tr>
<tr>
<td>- Control system for applications</td>
<td>- General control system for applications</td>
</tr>
<tr>
<td>- Support calculation</td>
<td>- Payment processing system</td>
</tr>
<tr>
<td>- Payment processing system</td>
<td>- Posting system, X-file reporting system and debtors ledger</td>
</tr>
<tr>
<td>- Posting system, X-file</td>
<td>- Interfaces to accounting and payment system</td>
</tr>
<tr>
<td>- Accounting and payment system</td>
<td>- User identification and rights system</td>
</tr>
<tr>
<td>- User identification and rights system</td>
<td>- Entry book system</td>
</tr>
<tr>
<td>- Entry book system</td>
<td>- Land parcel identification system</td>
</tr>
</tbody>
</table>

**Application administration system related specifically for afforestation applications**

**Control system related specifically for afforestation**

**Support calculation of afforestation**

---

Version 0.1
<table>
<thead>
<tr>
<th>Semi-substantial farming</th>
<th>There are no existing system for administrating the planned semi-substantial farming.</th>
<th>Client and farm register</th>
<th>Client and farm register</th>
<th>Application administration system related specifically for semi-substantial applications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current SAPARD management system cannot be utilised for the planned semi-substantial farming.</td>
<td>Application administration system</td>
<td>General application administration system</td>
<td>Control system related specifically for semi-substantial applications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control system for applications</td>
<td>General control system for applications</td>
<td>Support calculation of semi-substantial applications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support calculation of semi-substantial applications</td>
<td>Operational reports related specifically to semi-substantial applications</td>
<td>Application administration system for the meeting of EU standards measures.</td>
</tr>
<tr>
<td>Meeting of EU standards</td>
<td>There are no existing system for administrating the planned meeting of EU standards measures.</td>
<td>Client and farm register</td>
<td>Client and farm register</td>
<td>Application administration system for EU standards measures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Application administration system</td>
<td>General application administration system</td>
<td>Control system for EU standards measures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control system for applications</td>
<td>General control system for applications</td>
<td>Support calculation for EU standards measures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support</td>
<td>Support</td>
<td>Operational reports related specifically to EU standards measures.</td>
</tr>
</tbody>
</table>

| reporting system and deptors ledger | system and deptors ledger | afforestation |
| Accounting and payment system | Interfaces to accounting and payment system | Operational reports related specifically to afforestation |
| User identification and rights system | User identification and rights system | Cross-checks between afforestation and land parcel identification system. |
| Entry book system | Entry book system | |
| Land parcel identification system | Interface to land parcel identification system | |
Current SAPARD management system cannot be utilised for the planned meeting of EU standards measures.

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Applications</th>
<th>Control system related specifically for meeting of EU standards measures.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment processing system</td>
<td>Posting system, X-file reporting system and debtors ledger</td>
<td>Support calculation of meeting of EU standards measures.</td>
</tr>
<tr>
<td>Posting system</td>
<td>Accounting and payment system</td>
<td>Operational reports related specifically to meeting of EU standards measures.</td>
</tr>
<tr>
<td>X-file reporting system</td>
<td>User identification and rights system</td>
<td>Cross-checks between meeting of EU standards measures, land parcel identification system and animal register.</td>
</tr>
<tr>
<td>and debtors ledger</td>
<td>Entry book system</td>
<td></td>
</tr>
<tr>
<td>Accounting and payment system</td>
<td>Land parcel identification system</td>
<td></td>
</tr>
<tr>
<td>User identification and rights system</td>
<td>Animal register</td>
<td></td>
</tr>
<tr>
<td>Entry book system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land parcel identification system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal register</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6 STRATEGY OF DEVELOPMENT OF SOFTWARE FOR RDP MEASURES

The development of the system managing RDP measures has to be based on the existing standards and architectures used or to be used in ARIB. The architectures dealt here are:

- Application architecture
- Data architecture
- Technology architecture
- Development architecture

6.1 Application architecture

The general level application architecture to be used in ARIB for farmer-based subsidy systems is presented in ANNEX 1. The figure shows the major components of the system and the interfaces between the components. The development of RDP measures will lean on this
architecture. Almost each component presented in the application architecture will be complemented and/or modified when implementing the RDP measures. The more detail list of necessary changes is presented in Chapter 4.

6.2 Data architecture

The general level data architecture to be used in ARIB for farmer-based subsidy systems is presented in figure 1. The figure shows the major data elements of the system and the interfaces between the elements. The development of RDP measures will lean on this architecture. Almost each element presented in the data architecture will be complemented and/or modified when implementing the RDP measures. The more detail list of necessary changes is presented in Chapter 4.

![Data architecture diagram](image)

Figure 1. Data architecture

6.3 Technology architecture

The system will be based on three-tier architecture: client, application server and database. In the figure 2 can be seen the general technical structure of the system.
Figure 2. General level technical structure of the system
The application running in the workstations is programmed with JAVA language. The workstation has to be 32-bit (Windows 95/98, 2000 or NT) equipped with minimum 256 MB RAM and Java run time environment. The system will be running in the local area network in ARIB as well as in the closed wide area network used by 15 regional units. HTTP/RMI-protocol is used between workstation and network.

The application server runs with JAVA-components containing the most of the logic in the application. The applications run under Weblogic application server software. The operating system for the server is Sun Solaris. EJB (Enterprise Java Beans) standard is used in the application server. Oracle8 is used as a data base management system. The operating system for the server is Sun Solaris.

6.4 Development architecture

The development of the information systems should be based on proper system analysis method, project management method and quality control method. ARIB does not currently have these kinds of methods systematically in use. However, these methods will be used in forthcoming IT development projects and from there, ARIB will have some kind of practice for system development, project management and quality control. It is important to aim at having only one kind of methodology in use instead of several ones. Therefore, the methodology used in RDP measures should be the same as used previous project or projects. The most important project in this case will be the PHARE 2002 project.

The development tools used to build the software for RDP measures has to be the same as used for IACS. Therefore, the support calculation program will be build with C++-programming language and Oracle OCI-database interface. The other systems will be programmed using JAVA language with EJB-architecture. Jdeveloper or corresponding development tools will be used for user interface development. The transaction processing programs will be developed using PL/SQL.
7 ASSESSMENT OF COSTS FOR DEVELOPMENT

Based on the former analysis, it is possible to assess the development costs for the RDP measures (see Table 3). As several issues are still open, the estimation is only rough.

Table 3. Assessment of software development costs

<table>
<thead>
<tr>
<th>Measure</th>
<th>Software development costs (Euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agri-environment</td>
<td>210,000</td>
</tr>
<tr>
<td>Less-favoured area (LFA) subsidy</td>
<td>135,000</td>
</tr>
<tr>
<td>Afforestation</td>
<td>70,000</td>
</tr>
<tr>
<td>Semi-subsistence farming</td>
<td>70,000</td>
</tr>
<tr>
<td>Meeting of EU standards</td>
<td>100,000</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>535,000</strong></td>
</tr>
</tbody>
</table>

8 PROPOSALS OF CHANGES TO THE 2003 PROJECT FICHE

During the feasibility study process we find out that some changes has to be made in the project Fiché.

**Project justification**

Project justification needs some specifications to clarify the division between this project and project concerning the Development of Agricultural Information System (Phare 2002/000-597.05.03). It is also important to emphasise that very close co-operation is needed with these projects.

**Twinning experts**

It is necessary to adjust some tasks and profiles of short-term experts. We also find out that the amount of expert days should be declined so that there will expert days according following table:

<table>
<thead>
<tr>
<th>Expert days</th>
</tr>
</thead>
<tbody>
<tr>
<td>STE 1</td>
</tr>
<tr>
<td>STE 2</td>
</tr>
<tr>
<td>STE 3</td>
</tr>
<tr>
<td>MS project leader</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

The budget should be changed according to changes in expert days.

**Budget of the project**

As mentioned earlier in this report, some changes have to be made to the project budget. Based on experiences of developing software for RDP measures, the total budget for software
development should be declined € 50,000 from € 585,000 to € 535,000. That is possible because some elements of IACS system (client register, farm register and parts of application register) can be used as common elements when developing IT system for RDP measures.

9 SUMMARY

Planning of the RDP measures under regulation No. 1257/1999 is still unfinished in Estonia.

The volumes of the five RDP measures (agri-environmental, LFA, afforestation, semi-subistence farming, meeting of EU standards) are expected to be rather high.

To administrate the RDP measures, a software based on IACS is highly recommended.

To develop the RDP measures to the IACS software, IT development project consisting stages from specification to implementation is necessary.

The estimated amount of costs to develop a software for RDP measures is around 500,000 euros.

The development project has to take all standards and architectures used in ARIB into account.

The project has to be co-ordinated very well with Phare 2002 project (development of IACS).

Regarding a call for tender, a resource based tender is preferable.

It is necessary that ARIB provided adequate amount of resources to the project.

The project should start as soon as possible to be able to be ready in 2004.
ANNEX 1: General architecture of the IACS system in Estonia

- Animal register
- Land parcel identification system

IACS base system
- Client and farm (holding) register

- Application administration system
- Control system for applications
- Support calculation
- Payment processing system
- Posting system
- X-file reporting system and debtors ledger

- Accounting system
- Payment system

- User identification and rights system
- Entry book system

Legend:
- Existing system, will be re-programmed with new technology
- Existing system, interface required
- Components included in the Finnish IACS
- Commercial software, interface required
- New system, which has to be built
- Not existing system, initial interface required