



RESEARCH AGENDA DREPORT

10-11 March 2009

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ABBREVIATIONS

AFRICASAN	Africa sanitation
ASGISA	Accelerated and Shared Growth Initiative of South Africa
AT	Appropriate Technology
CEB	Compressed Earth Block
CER	Centre for Energy Research
CoP	Communities of Practice
CRD	Center for Rural Development
CSIR	Council for Scientific and Industrial Research
DB	Database
DBSA	Development Bank of South Africa
DEDEA	Department of Economic and Environmental Affairs
DWAF	Department of Water Affairs and Forestry
ECDC	Eastern Cape Development Corporation
FAO	Food and Agriculture Organisation
FET	Further Education and Training
HSRC	Human Science Research Council
ICT	Information & Communication Technology
IKS	Indigenous Knowledge Systems
KM	Knowledge Management
LGRC	local government resource centre
MOU	Memorandum of Understanding
NGO	Non-Governmental Organization
NHBRC	National Home Builders Registration Council
NMMU	Nelson Mandela Metropolitan University
PFMA	Public Finance Management Act
PV	Photovoltaic
REAP	Rural Enterprise Advancement Program
SANERI	South Africa's National Energy Research Institute
SEDA	Small Enterprise Development Agency
SCB	Soil Cement Blocks
SMMEs	Small, medium and micro enterprises
SSB	Stabilized Soil Block
STATS SA	Statistics South Africa
UFH	University of Fort Hare
VIP	Ventilation Improved Pit
WIN-SA	Water Information Network - South Africa
WSU	Walter Sisulu University

1. INTRODUCTION

The Eastern Cape Appropriate Technology Unit (ECATU) is a public entity listed under Schedule 3C of Public Finance Management Act (PFMA), no 29 of 1999. The entity reports to the Office of the Premier (OTP) in the Eastern Cape Province, through a Service Level Agreement that forms the basis of performance review.

Background History

Previously known as TATU, its powers were defined by the government of the former Transkei as the planning and financing and implementation of “projects relating to appropriate technology in all developments in the Transkei”. Following democratization in 1994, and absorption of the Transkei into the Eastern Cape Province, TATU took decision to change to ECATU and, in principle, to expand its activities outside the former Transkei into the wider Eastern Cape. Ecatu is now celebrating 25 years of Existence. To realize its objective of serving rural communities through research and application of relevant technologies in these communities, ECATU has contributed tremendously to poverty alleviation through the implementation of appropriate technologies in the province. The milestone achieved by ECATU in its 25 years of existence includes;

1. Provision of underground water tanks to the rural communities who fetch water from as far as 4km away from their residential places.
2. Provision of carpentry and welding skills through training of community members.
3. Training of women in bid work.
4. Sanitation Programme. This project seeks to strengthen capacity in rural onsite water, Sanitation and health sector through the provision of sanitation facilities and water biofilter purification systems.
5. The establishment of the ECATU organic pilot site to demonstrate alternative technologies in organic farming.
6. The production of ECATU brick. This project seeks to demonstrate the alternative technologies to housing using community labour and resources. It is important to note that most of ECATU's success has not been shared with the entire province hence the expansion plan in progress.

The mandate of ECATU is to support Government Policy objectives in the area of socio-economic development and poverty eradication by planning, financing and carrying out projects relating to appropriate technology in all the developments fields in the province, namely; Undertake research and development of existing and proposed technologies in the public and private sectors into any field of appropriate technologies and provide technology solutions for rural development and poverty eradication;

- Provide technical advice, where necessary, to government on innovations to support policy and decision –making;
- Promote sustainable development techniques and methodologies.

It is a significant milestone that in its twenty fifth year of existence, the objectives of ECATU are to be legislated and significantly expanded through the pending promulgation of the Eastern Cape Appropriate Technology Unit Bill which was published for public comment on 1 March 2006 and has undergone the requisite stakeholders consultants. The Bill envisages the implementation of the wider mandate for ECATU which entails serving the entire Province. The main activities of the entity are: Applied research, Policy and decision support, Project management, Business development and Social facilitation

The main focus technology theme for ECATU is to:

- Contribute to the development of an agrarian economy and facilitate food security
- Facilitate access to basic infrastructure
- Facilitate access to alternative sources of energy
- Facilitate access to water and sanitation facilities

In line with the growth strategy of the organization, other relevant areas for the future are: Health, Education, Environment, Tourism, Entrepreneurship and ICT's

Vision: To be a leading provider of innovative technologies to advance rural development in the Eastern Cape

Mission: To promote the creation of sustainable rural livelihoods through conducting applied research, development of innovative and appropriate technologies and the advocacy for implementation in rural communities in the Eastern Cape.

Policy and Strategic framework

ECATU is required to align itself with key national and provisional policy, strategic frameworks and their objectives by researching, developing and facilitating the implementation of appropriate technologies to respond to the anticipated outcomes of these frameworks. Key national and international policy directives are Millennium Development Goals, Ruling Party Election Manifesto 1994, 1999, 2004, Polokwane Resolutions 2008, Vision 2014, NSDF, ASGISA, JIPSAf, 24 Apex Priorities, and Batho Pele. Key provincial policy directives are: Provisional Growth and Development Plan 2004-2014 and High Impact Priority Projects 2006

2. THE RESEARCH AGENDA

As a knowledge generation initiative, ECATU hosted a research agenda on the 10-11 March 2009. The focus of the discussions was on the broad theme “bridging the rural economic divide through research and appropriate technology”

Objectives of the research agenda

- To solicit input from strategic partners to inform the ECATU research Agenda for 2009- 2013
- To assess and review research focus areas and priorities for ECATU that give a greater impact to its mandate to serve the rural poor
- To identify and engage with various funding sources for implementation of the research agenda
- To identify and build strong partnerships for engagement in research and application of appropriate technology
- To take stock of existing research capacity and areas that needs additional capacity.

Research Agenda was organized to bring together all partners to give input to the research agenda for ECATU for 2009 – 2013. This partners forum drew attendance from the Department of Agriculture (Mthatha Dam), ECATU Board of Directors, Walter Sisulu University (WSU), Human Science Research Council (HSRC), Tsogang, Development Bank of South Africa (DBSA), Office of the Premier (OTP), Eastern Cape Socio Economic Consultative Council (ECSECC), Nelson Mandela Metro University(NMMU), Mvula Trust, Department of Water Affairs and Forestry (DWAF), Statistics South Africa (STATS SA), RULIV, Council for Scientific and Industrial Research (CSIR), HYDRAFORM, Department of Economic and Environmental Affairs (DEDEA), Department of Public Works (DPW), Eastern Cape Development Corporation (ECDC), Ntinga, Department of Housing (DoH), Fort Hare University, Accelerated and Shared Growth Initiative of South Africa (ASGISA),SEDA and Department of Trade and Industry(DTI).

The forum generated in-depth information on areas of intervention for ECATU to fast track rural development in the EC. The discussions thoroughly addressed the complex and interrelated socioeconomic challenges the Eastern Cape Province is confronted with such as poverty, unemployment, lack of skills and food insecurity with a view of providing an improved knowledge base to address these issues in line with our mandate.

Objectives of the report

- Provide focus on ECATU's research direction in meeting its mandate to address rural development and poverty within the province.
- Reflect on presentations and discussions emanating from various topics of interest
- Reflect on opportunities that lies ahead for ECATU, this may include partnerships or potential projects
- Present resolutions as agreed upon by the delegates

3. OPENING ADDRESS

Mr M.M.M Swana, the chairman of ECATU board welcomed guests to this very first research agenda. In his speech he expressed his joy for seeing people from all walks of life dedicating time to contribute invaluable input to this organization. He also highlighted the socio economic issues facing the Eastern Cape and appealed to speakers and all participants to be practical in their suggestions so as to provide ECATU with something that can be implemented not just philosophical speeches!

The Chief Executive Officer of ECATU Ms Z Silo set the tone for presentations by outlining the organizations' strategic priorities across all programmes and they are as follows:

Strategic Goal 1: Program 1 – Research and development strategic options

- A fully functional and capacitated Research and Development section by 2014

Strategic objectives:

- Enhance research intelligence
- Development of knowledge management and sharing
- Testing, adaptation and piloting technologies for widespread adoption and mainstreaming

Strategic Goal 2: Program 2 - Business Development

- Accelerated productive use of tested technologies`

Strategic objectives:

- Mainstream the productive use of ECATU technology
- Enhance strategic partnerships
- Facilitate community participation
- Intensify resource mobilisation

Strategic Goal 3: Program 3 – Corporate and support services targets 2009/10

- Enhanced financial sustainability and self sufficiency (internal control, financial sustainability, funding, new projects, compliance and image)

Strategic Objectives

- Ensure compliance and facilitate adherence to good corporate governance principles
- Enhance strategic planning and monitoring to contribute towards the strategic and policy objectives of government.
- Ensure effective and efficient expansion of ECATU throughout the Eastern Cape
- Ensure financial sustainability
- Enhanced organizational capacity and efficiency

Additionally, the presentation highlighted the national and internal policy framework (refer to background history above) that ECATU aligns itself with regarding rural development. Emphasis was based on the role of applied research for ECATU to achieve its mandate. Due to lack of capacity strengthening partnership with other stakeholders was not overlooked. Proud of the impact ECATU had on communities in the EC, the presentation was concluded by highlighting some of the projects within basic infrastructure, water and sanitation, food security and alternative energy. For every journey one embarks on hurdles are bound to emerge, the presentation acknowledged that implementation of programs had their own challenges and are regarded as lesson learned. The concluding remarks focused on the objectives of the research agenda and ensuring that delegates comprehend the ECATUs expectations.

4. DISCUSSION FOCUS FOR THE RESEARCH AGENDA

The research agenda focused on eight (8) subthemes namely, knowledge management, alternative energy, Integrated Sustainable Rural Development (ISR), community cooperatives, food security, water and sanitation, basic infrastructure, appropriate technology and rural development. The discussion below will focus on the subthemes to reflect on what was discussed during presentations, commissions and the partnerships that were suggested.

4.1 KNOWLEDGE MANAGEMENT (KM)

A presentation was delivered by Ms Charmaine Kotze from DBSA who initially focused on the rural development projects they are involved in within the Eastern Cape. Their "primary focus is to fund SA for development in the following fields - Water & Waste, Social Infrastructure, Transport, Rural, Agriculture, Fisheries, Forestry", which forms part of Ecatu's area of focus. Amongst some of their projects the following was mentioned; effort to create jobs, to provide basic services to households, poverty alleviation and economic integration. For the benefit of EC communities, various projects were also aligned with the national strategic intervention e.g. Technical grants were made available, financial support was offered to Makana Infrastructure projects such as Matatiele LM, Buffalo City and Nelson Mandela bay 2010 soccer stadium. DBSA invest its resources on projects that are economically viable and as part of its strategic intentions on human capital it focuses on knowledge management.

The presenter defined knowledge management as “right info, right context, right people, right time, take appropriate action”. Knowledge management is regarded as a vital activity for achieving personal mastery. People are viewed as assets in organizations and emphasis is placed on cultivating a sharing culture to improve on their tasks. A formula for the success of a KM initiative relies on 70% people, 30% on processes and 10% on Technology. People are drivers of the activities as they are the ones acquiring tacit knowledge through their daily experiences.

Knowledge can exist in two forms explicit and tacit. Explicit knowledge is structured and easy to share. Substitute 30% of organizational data and is embedded in reports, manuals, policies and procedures. Tacit knowledge is unstructured and is vital to capture as it forms 70% of organizational asset, but embedded in people’s minds. Various techniques were identified as a means to share tacit (intangible) knowledge - e.g peer assist, mentoring, coaching, blogs and forums.

At the centre of knowledge management is the sharing of knowledge that can be done through networking sessions with interest groups such as Community of Practice(CoP), local government resource centre (LGRC), developing a portal, databases/repositories. Attention needs to be placed on the simplicity of the repository chosen and user-training should be facilitated to enable people to use the system with ease. Transparency plays a major role as it builds trust, and is an eminent feature needed for people to freely share their expertise. A clear strategy and policy plays a role in the planning phase before embarking on implementation.

The four pillars of KM presented reflected some similarities between Ecatu & DBSA KM strategies. The pillars were mentioned as generation, capturing, dissemination; storage and accessibility tied with the 2nd phase of ECATUs KM framework. Although similarities exist the commissions emphasized that each organization should align their strategy with its processes.

DBSA perceive learning from the past and its customers as vital. Learning creates a basis for generation of new knowledge and using best practices and lessons learnt can eliminate the challenges of reinventing the wheel.

OUTCOMES FROM COMMISSIONS

Although presentations were very broad and encompassing developments in the EC, commissions were focused on strategizing on how ECATU can solve challenges encountered and improve on the daily operations.

When it comes to the application of knowledge process, each organization becomes distinct based on their internal processes. ECATU is therefore advised to align the KM process with organizational process. To identify/generate knowledge various information sources can be consulted and that shall be determined by Ecatu core business, policies and beneficiaries.

For capturing and storage of the collected information ECATU can develop its own database and participate in tool integration among partners. For instance STATS SA owns a database hosting socio economic data (e.g. water & sanitation backlog data) to identify service delivery provincially. The database (DB) is installed and the user training is offered to the government department and public entities for no charge.

For rural setting, ICT can be a challenge therefore for ECATU non technological techniques can be a solution these includes, the use of paper based medium (publications), notice boards, posters/leaflets in local language, verbal debriefing after meetings, multi departmental meetings, consulting with government departments, participating in existing community forums and most importantly emphasize report writing. Ruliv can be consulted regarding the research done on the use of ICT in rural area and dissemination of knowledge around the world e.g. e-inclusion.

The presentation of information is also important since language can become a barrier when dealing with communities. Therefore the report needs to be simplified, where possible use local language, use pictures and outline the project progress using storyboard.

As mentioned above there are challenges to sharing tacit knowledge, but in addition to what was mentioned in the presentation ECATU can use lessons learnt from other organizations/ countries (India), can compile simple procedural manuals. ECATU can encourage the community to share indigenous knowledge (IK) by writing their own books on subject of interest. For example Ruliv is involved in a project where a community is writing a book on medicinal plants. Incentives will need to be part of the process to encourage participation.

Proposed Partnerships

To enable ECATU to gather credible information it can collaborate with STATS SA (DB for water & sanitation backlog), HSRC, and CSIR. ECATU needs to align itself with government programmes, NGOs, parastatals, local municipalities and make an effort to understand community needs. Other partnerships can be forged with Department of Social development (DB), Ruliv (for lessons learnt & use of ICT in rural areas), DBSA, academic institutions, KM Africa and sister organizations such as ASGISA-EC.

4.2 ALTERNATIVE ENERGY

Ronnie Mulder was the presenter for energy theme and was representing the Centre for Energy Research (CER) within Nelson Mandela Metropolitan University (NMMU). The Centre for Energy Research (CER) is a multi-disciplinary research centre incorporating scientists, engineers and economists. Research activities of the Centre include; Photovoltaic (PV), Solar Water Heating, Renewable Energy Systems, Energy Storage, Energy Materials, Wind Energy, Energy Efficiency, Management and Control, Energy and the Environment and Energy Economics

The aims of the Centre are to produce graduates skilled in the energy field, perform strategic and competitive applied research, promote empowerment of previously disadvantaged communities within the various fields of energy research, promote public awareness and understanding of all forms of energy, energy efficiency and its importance, develop the capacity to undertake contract research, contribute to multi-disciplinary research and to promote and strengthen international collaboration with partner universities and institutes

The Centre for Energy Research contributes to addressing the energy needs of our region through applied research and collaboration various stakeholders in the energy industry. The Centre for Energy Research uses facilities available at NMMU to grow postgraduate student numbers and increase outputs. The Centre for Energy Research contributes to the general mission of the NMMU. Mr Mulder presentation focused on solar energy research that they have undertaken in South Africa and other countries. In making the presentation so practical, Mr Mulder played the DVD, which showed the network of sources of energy. Here energy is being absorbed from the sun using solar system and this energy is then stored in batteries for later usage. According to Mulder this technology has proven to be viable, but there must be enough funding for it, since solar is so expensive. The presenter came to conclusion that, this technology is not a solution to rural communities, since this technology is so expensive when considering its cost and maintenance. He then recommended for it to be used only in schools and clinics.

OUTCOMES FROM THE COMMISSION

Below are questions that were proposed for commissions

a) *Is Biogas appropriate for rural communities?*

Biogas is appropriate solution to the problem of energy in rural communities, since it can be generated from local resources, it is renewable, has low maintenance costs. Initial cost for biogas production is too high to be afforded by the rural poor. This is actually one of the reasons this technology is not rolled out to community at the rate it should enhance community involvement. Biogas is also safe to use and can be used to generate income by communities. The challenge with this is that there is not easy and cheap way to package biogas which might make it

impossible for communities to sell.

b) Lessons learnt from other technologies

Solar thermal is (solar water heaters) easy to maintain, quick results and beautiful. Solar Panel (less energy generated) only for lighting, not for cooking. Wind turbines (expensive but cheaper than PV) but are able to supply large communities with full electricity. The major challenge about the above technologies is that they are expensive for rural communities to afford.

c) Cultural issues that may hamper adoption of Biogas by communities

Research should explore the potential for developing innovative energy services in the context of both rural regeneration and tackling rural energy challenges. It should therefore focus on feasibility studies, pilots, social and environmental cost/benefit analyses and community participation potential. Social facilitation must be strengthened in order for the communities to accept these new technologies. Some of the challenges that might be faced when rolling out biogas are:

- *Witchcraft – Belief from rural communities that touching one's human waste may lead to bewitching*
- *Human Waste – that touching of human waste may lead to mishap*
- *Safety – dangers of biogas e.g. smoking in toilets or next to digesters*
- *Availability of water – digesters require that the toilet be a flush toilet and this may pose challenges in areas where there is scarcity of water. In such cases people may be required to improvise.*

During the rollout phase, research must come up with forms of incentives to encourage communities to use these alternative energy methods.

d) Accessibility of Biogas

Biogas can be sourced from local materials such as animal and human waste (cow dung, pigs, chicken). Farms that are running livestock, such as cattle, goats, sheep, chicken and etc will be consulted. Kitchen waste will also be collected from houses, hotels, restaurant and etc.

Proposed Partnerships

Partnership with other organizations is important, but duplication of projects needs to be avoided. For combined efforts and technical support relevant stakeholders needs to be consulted. ECATU is advised to consult the following institution for technical support, Institutions of Higher Learning (UFH, WSU, NMMU, Rhodes University etc), DEDEA, Asgisa-EC (for funding), Peoples Power Africa, Agama Energy, Rhodes University, CSIR and DME (SANERI etc), and SASOL (for biofuel),

4.3 INTERGRATED SUSTAINABLE RURAL DEVELOPMENT (ISR)

Mr Ntshona, policy researcher from Eastern Cape Socio Economic Consultative Council (ECSECC) presented on Rural Development and Agrarian Transformation enacted from a Rural Development Strategy (RDS) concept paper. On a brief background Mr. Ntshona introduced that the Eastern Cape government is currently developing a Rural Development Strategy. The presentation first defined rural development and its discourse. In 2008 Cabinet Lekgotla came with a resolution to develop the RDS and convene Provincial Land Summit.

The presentation explored the thinking on RDS which started in 2000 when the Rural Development Framework aimed at focusing the attention on issues of rural development and building consensus within the strategic alliance partners in development. The framework was calling for an integrated rural development strategy and identified four areas of intervention which are as follows:

1. Policy development
2. Programme design and implementation
3. Technical, financial and institutional support
4. Democratic participation

The currently drafted RDS introduced five elements which it envisaged. Firstly the main thrust of the RDS proposes that the agrarian transformation should be underpinned by land reform programme. Secondly, the pillars of the strategy are to coordinate area based planning and development, build on rural productive capability, eradicate infrastructure backlogs and improve education and health.

Thirdly, coordination of the strategy defined the role of the secretariat, multi-stakeholder steering committee, regional roundtable discussion and wider group which included a number of stakeholders which have rural development as a cross-cutting initiative. Fourthly, the objectives of the strategy is to provide a framework to design interventions to reinforce the agrarian transformation and rural development pillar of the PGDP. Fifthly, expected outcomes are to produce a rural development with implementation plan and institutional mechanism to drive implementation. Lastly, the process plan which outline the pre strategy period, the development of the RDS and workshop on practical models and consolidation and integration.

OUTCOMES FROM THE COMMISSION

The commission was guided by four questions which needed to be responded to, and the resolutions and proposals were put forward.

a) *What role must ECATU Play in the process of developing the RDS/ and how will its mandate support the RDS*

The development of a chapter of the RDS on Appropriate Technologies is a signal of ECATU's role in the development of the strategy. ECATU must also provide technical support to the secretariat particularly on Appropriate Technologies (AT) and models that can be implementable at rural level and integrated in local government programmes. Elevation of AT and integration at all levels of the strategy is key, continued research on new technologies within the institutional framework will drive the RDS.

Introduction of AT as part of science and technology curricula at primary level so as to influence and create awareness of AT is crucial. This can further be elevated to tertiary level through introduction of tertiary qualifications, taking advantage of FET transformation. To assess value chain for production from all the elements of the value chain and position EC as food basket and cascade these technologies for self sufficiency at household level

b) *How can we measure the mainstreaming of AT within the framework of the RDS*

The mainstreaming of AT need to be packaged across all sectors and earmarked for implementation of the RDS. This is supposedly measured by how many government programmes have packaged AT as part of their plans. Marketing and publicizing the technologies to relevant exhibitions and publication is important in mainstreaming. ECATU also needs to claim space for research analysis for the measurement of AT mainstreaming. Research tools to measure the mainstreaming were highlighted as follows:-

Economic Impact Assessment which will include number of jobs created through usage of AT, number of people who were empowered, and the contribution to the local economy through enterprise development. Other monitoring and evaluation tools need to be developed to navigate the maximum mainstreaming.

Other overlapping issues in the commission included development of terms of reference to analyse the role of other entities in the RDS. Champion of AT should be developed and this would be realized after the ECATU Bill is finalized.

4.4 COMMUNITY COOPERATIVES

A presentation on Community Cooperatives by Siv Hesjedal from ECSECC first focused on provincial Cooperative strategy. The presentation explained that agriculture and services were the prominent sectors explored by many cooperatives. It further gives analysis that many cooperative registered in 2006 and the majorities were lacking resources. Most of cooperative funding is from membership fees seconded by government funding in terms of cooperative support.

A baseline study conducted by ECSECC, Dora Tamana Cooperative Centre and Funda Education and Training Cooperative came with the following findings:-

- There is a lack or limited access to market for cooperatives, but ECATU is assisting them in terms of access to potential markets. The findings also highlighted that there is lack of cooperation between cooperatives, therefore that is the reason for identified deficiencies.
- The support offered by most institutions is auxiliary, and the fact that many cooperatives have received little training and mentoring. ECATU was advised to ensure appropriate support in terms of training in AT. Research to inform training needs by other institutions
- Basic principles of cooperatives were overlooked by the fact that many cooperatives were being formed for profit related motives not for primarily meeting the needs of its members and of its community.

The presentation further looked at the four pillars of Provincial Cooperative Development Programme which were as follows:-

1. Institutional Capacity for Supporting Cooperatives in the Eastern Cape
2. Support Infrastructure for Cooperative Development
3. Building and Independent Cooperative Movement
4. Research, Knowledge and Database Management

Integration of role-players in cooperative development was the core as the presentation highlighted many duplication. It suggested finding a niche and addressing main gaps like ECATU focusing on product development and overall contribution to provincial programme.

Outcomes of the Commission

The commission represented by various role-players in enterprise development which include DTI, SEDA and ECDC responded to the topics as follows

a) How do ECATU approach integration of role-players

The commission first identified all role-players in enterprise development and classified them in their spheres. These were ranging from institutions offering non financial support to development finance institutions who are offering financial support to cooperatives. The commission agreed that ECATU need to clearly define their position on wide field with many enterprise development players. ECATU revised focus should primarily be on product development and training particularly as it relates to AT.

b) What are the organisation to be approached for funding

A number of stakeholders offering financial support to cooperatives were identified, which included incentives and grants from DTI, RULIV, Thina Sinako. It was also highlighted that a R50m for 2009/10 financial year has been set aside by the DEDEA for cooperative development programme. It was also mention that the provincial cabinet has committed 5% of procurement should be set aside for cooperative development. The commission also explained that there is a need of a clearer process plan at a provincial level that will unpack the role of each role player. This would assist in defining the phase a particular stakeholder should enroll with a cooperative, for example when does ECATU come with product development and DTI with grant. Establishment of forums of support at district level that focus on cooperative development is necessary in ensuring success of cooperatives and need DEDEA present at project level.

c) Addressing lack of Provincial Strategy and Guidance

The commission agreed that it is cumbersome to integrate the work with the lead sector department responsible for cooperative (DEDEA). A robust communication and advocacy is required to address this sudden bottleneck. Absence of provincial forum that is continuously giving guidance on cooperative development was also one of the underpinning issues in cooperative development.

PROPOSED PARTNERSHIPS

Provincial Departments, DEDEA, SEDA, RULIV, SAMAF, BANKS, HEI IDT, NGO's, Thina Sinabo, KHULA, District municipalities, Development Agencies

4.5 FOOD SECURITY

This topic was presented by Dr A. Mnkeni, a manager of vegetable processing unit at the University of Fort Hare. Dr Mnkeni has experience in food security work and has made a massive impact on the lives of project members and their families through the agro-processing work.

The presentation was started off with a definition of food security. Food security exists when all people at all times have physical and economic access to sufficient , safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 1996).

According to the presentation, South Africa is classified as food secure at national level but an estimated 35 % of the population (14 million people) is vulnerable. An estimated 70 % of the rural population is considered food insecure and spend more than 60% of their incomes on food.

The Eastern Cape is among the poorest provinces in South Africa. The population of this province is estimated at 6.9 million (Stats SA, 2007), and 60 % of this population lives on communal land in rural

areas. 70 % of the rural population is considered food insecure and spend more than 60% of their incomes on food. The Eastern Cape is characterized by availability of underutilized high potential arable land.

Agriculture and food security

At national level, the number of households engaged in agriculture as a main source of food supply is decreased from 33% to 15 % between 2000 and 2006. In the Eastern Cape the number was 12% in 2000 but now it is estimated to be 2.5%.

Rural farmers in the Eastern Cape face many challenges. High levels of poverty and prevalence of HIV/AIDS are some of the challenges. Marketing of produce also ranks high on the challenges faced by these rural farmers. This is worsened by the fact that these small scale farmers try to compete with commercial farmers who are more established. The quality of produce is also a challenge for these resource poor farmers.

Access to credit was also mentioned among challenges especially because resource poor farmers do not have collateral or land tenures. Most of rural farmers do not have business plans and thus cannot approach funding institutions for financial help. Dr Mnkeni also mentioned that rural farmers lack knowledge of food preservation at a household level and hence UFH has developed the vegetable processing unit.

The University of Fort Hare has established a Community Engagement Partnerships through Rural Enterprise Advancement Program (REAP). The objectives of this initiative are to develop new sustainable and economically viable agricultural production and processing models for small scale farmers; linking agri-based businesses and develop new economies around rural towns and also to develop a research, development and training incubator for supporting established models.

There are four big projects under Rural Enterprise Advancement Program (REAP) i.e. the Agripark; Animal Traction; the Nguni and the Dairy project. The project under discussion (vegetable processing) falls under Agripark, whose objectives are creating jobs through local vegetable production and value adding enterprises in rural communities; investing in training for small scale vegetable producers and processors; improving credit availability and establishing sustainable markets for value added products.

Outcomes from the Commission

These sessions were meant to clearly state challenges faced by ECATU and therefore suggesting strategies to embark on. This section will reflect the discussion as they occurred in the food security commission, and the questions reflected on the terms of reference will be addressed as follows:

a) *Is organic farming technology appropriate for rural communities?*

The team felt that organic farming was appropriate for rural poor communities as it requires resources that are locally available. However, it was stressed that organic farming was not a 'solution' to the big numbers of poor people who are vulnerable to food insecurity. It was highlighted that organic farming can be used in household gardens with the intentions of upscaling the production into massive production. ECATU need to conduct a study on organic fertilizers which will assist in massive production. It was suggested that ECATU should identify other projects that would complement this organic farming and thus make a bigger impact to the targeted communities.

b) *How to link organic farming to Siyazondla Homestead Food Production Programme?*

This could be achieved through partnership with the department of agriculture.

c) *Sustainability of organic farming and roll out within government programmes*

The question of sustainability of organic farming can be answered by research. ECATU needs to form partnerships with research institutions as well as institutions of higher learning in order to widen its scope of research.

Proposed Partnerships

After the presentation, a team of experts in the fields of agriculture and food security used commission to further discuss issues that highlighted from the presentation as well as to look closely at ECATU's position concerning food security. The current organic farming pilot projects of ECATU were to be analyzed with recommendations of how to improve Fort hare University can come into play. Furthermore, the commission was to identify strategic partnerships that ECATU could form with its food security program. It was further proposed that ECATU should consider agro processing for its organic farming project. Packaged vegetables bring better profits than vegetables that are not packaged, said Dr Mnkeni. The UFH's Agripark team is ready and willing to go around training communities on this technology of processing and packaging. WSU and other academic institutions around Africa can be useful for research purposes.

Another recommendation was for ECATU team to focus on piloting the organic farming strategy, document lessons learnt and pass on to other organizations that can adopt this technology. An example of such a partner was the Department of Agriculture's Siyazondla Project. Local municipalities, ASGISA, CSIR, ECDC and other development agencies could also be targeted with the information compiled through pilot projects.

Incorporating indigenous knowledge systems (IKS) to ECATU's organic farming project was another recommendation that was made. While incorporating IKS, it would be good for ECATU to document and publish booklet translated in local language (Xhosa), on its technologies such as organic farming for food security. The Department of Water Affairs and Forestry (DWAF) would be a good partner with their water harvesting project at household level. For rolling out of projects ECATU need to partner with government dept and municipality since ECATU lack capacity to implement.

4.6 WATER AND SANITATION

Mr. John King for the organization called Tsogang was the main presenter for water and sanitation session. Tsogang is a water & sanitation non-governmental organization (NGO) with its headquarters located in Tzaneen, South Africa. Tsogang's was founded in 1996 and has since performed relief work and capacity building for communities in the Limpopo and Mpumalanga provinces in South Africa. Its mission is To support the development of rural & peri-urban people through the provision of sound technical advice in infrastructure & housing delivery, the promotion of ongoing financial accountability, strengthening community organizations, operations & maintenance, and health and hygiene awareness.

The presentation focused on appropriate technologies in water and sanitation that have shown practical success when they were implemented in projects. Mr. King started his presentation with a short background of situation that is faced by rural communities. He highlighted that many rural communities still have no access to clean water and those who have access are having problem with the maintenance of the systems in use and the municipalities are failing to maintain those systems. He states that an appropriate solution to the challenges facing communities without access to water should be based on a full understanding of the particular environment. This means spending time with the community to get a complete picture of the ; population, availability of materials, local skills, current sources of water, available income, political environment, proximity to municipal services, prevalent diseases and a number of disabled people. It is after accessing this information, that an appropriate solution can be decided upon and planned.

Water technologies

According to King an appropriate technique to rural communities depend on the situation of particular village and differs from community to community, for e.g. for a particular community, an appropriate technology may be a Bulk reservoir, for other community it may be the borehole and for other community it may be a hand pump. Community participation in choosing what is appropriate for their community is very crucial in this regard. A list of available technologies in South Africa include:-

- Boreholes with diesel, electric or solar driven pumps
- Hand pumps

- Play pumps
- Protected springs with gravity feed
- Ferro cement, brick and cast cement for reservoirs.
- Single pit, double pit and urine diversion for VIPs.

The presenter affirmed that the implication here is that the project implementers should be conversant with all of the above mentioned techniques. According to King, the programme as laid out in the white paper and the national strategy is not working and government has been forced to change its delivery date, hence health and hygiene training are not always carried out. The presentation mentioned that even the taps that have been rolled out to communities should also be appropriate, in terms of the design, it should be user friendly and must have a stand that can be used to put a bucket on top to make it easier for kids to lift onto their heads. DWAF and other organization are now experiencing the problem of theft of their equipment and diesel engines, so security must be also included in the planning of water projects.

Potential Challenges for water technologies includes affordability for municipality to provide, lack of cost recovery after implementation of projects, operating and maintenance, utilization and sufficiency of ground water and monitoring of ground water.

Sanitation technologies

The current government subsidy for sanitation covers single and double pit VIPs and the urine diversion type VIP. The problem about the two recommended technologies, is the question around sustainability and recycling of these techniques, for e.g. a property built VIP will give 10 years service, and then what?, a double pit will give continuous use but the dry must be emptied at the end. He further articulate that the sanitation programme based on one size fits all, is not working as it ignores the particular family needs such as disabled person who is using a wheelchair.

Disadvantages of some of the sanitation includes especially VIP is it is not movable, depending on material used, Operating and maintenance is a challenge for VIP especially the emptying of pits

Outcomes from the Commissions

The questions below were deliberated upon

- a) *Which technology is proven to be the best appropriate to communities?*

Dry-Box Sanitation system was selected to be the best technology that is appropriate to communities. ECATU was advised to consider disable people when designing the structure in order to accommodate physical disabled people and this should apply to all technologies that are being roll out to communities.

Proposed Partnerships

For ECATU to realize its mandate programs should be linked to relevant partners e.g. for energy, partnership can be forged with Department of Mineral and Energy. Ecatu is advised to form partnership with DWAF for information dissemination (Ms Machimana to facilitate), WIN-SA, AFRICASAN and tertiary Institution. It was recommended that ECATU should make use of Internet to collect information, participate in attend AT conferences, revisit municipal indaba resolutions, liaise with Mr J King for a handbook on ATs and CSIR handbook (the original blue book) for information and technical advice. In extending the partnership beyond government ECATU was advised to network with other stakeholders, take up joint ventures (projects) with relevant stakeholders, link ECATU programmes to relevant partners, identify potential donors, write papers for publication, in order to get exposure, identify organizations/companies dealing and leading in appropriate technology and formalize agreements(MOU) where appropriate. To accomplish and influence the above task, ECATU was advised to have a clear business case. For rain water harvesting ECATU can collaborate with Ilima and are invited by DWAF to join on KZN project. Additionally DWAF committed to providing technical guidance towards implementations of some of the water & sanitation technologies.

Sustainability and adoption of techniques by communities

ECATU was advised that; for technologies to be adopted and be sustainable the following criteria must be met, Technology must be accessible, Technology must be easy to operate and maintain, Cost of maintenance of the technology, Life span of the technology and durability, aligned of the technology with government policy, Technology must be environmental friendly, Community aspiration should be considered. Sustainability pillars include community involvement, Ownership, Choice of material, Location of a project, Institutional development.

Additionally the following suggestions were made; When providing water and sanitation, should also consider food security (integrated development). Grey water should be used for irrigation, livestock and construction of houses and when purified it is suitable for washing. It terms of gardening compost emanating from sanitation technologies should be used for fertilization of crops and the same compost can be reused for biogas or sold for income generation. Vermin compost can be explored ECATU can consult Fort Hare University on its use.

4.7. BASIC INFRASTRUCTURE

Hydraform, a world leader in masonry construction and the manufacture of hydraulic block machines, Hydraform specializes in using soil cement Compressed Earth Block (CEB) technology to produce interlocking dry stacked Soil Cement Blocks (SCBs). The company's core business is therefore the manufacture and sale of these Stabilized Soil Block (SSB) machines.

Hydraform was established in 1988, its head office is in Johannesburg South Africa. Mr Sam Mkulembe was the candidate representing Hydraform. His presentation was about the blocks as produced by Hydraform. The presenter started his presentation by reverting to the history of the earliest man, showing how the earliest man satisfied their need for shelter. It was stated that the material used to construct the houses was sourced from the environment in which people lived. Shelter was functional and able to withstand sun, wind and rain. The presenter then explains the situation of shortage of housing in South Africa, where increasing population resulted in increasing demand for shelter, with the limited resources.

Why the Hydraform building system

Hydraform blocks are produced from laterite (building sand/subsoil) and 5-10% cement. It is easy to train people on brick making and easy for local communities to build and manufacture blocks. Quality control is easy; blocks can be checked before being used in construction. The advantage of the technology is that it provides skilled employment generation and use local material and labour. Hydraform blocks are not burnt, and therefore environmental friendly and are interlocking and dry stacked, minimizing the need for mortar. Hydraform provides full training and support worldwide. Hydraform blocks have been for used for construction of buildings and walls and they have used worldwide in countries like Nigeria, Tanzania, Zambia, Burundi, Philippines.

Efficacy and sustainability of the ECATU brick

The technology has been proven to work and has been successful implemented across the world. It is also good for DIY builders, due to little mortar required, easy to learn how to build with. This technology is brilliant for setting up local block yards as self contained sustainable businesses. Hydraform has 20 years of experience in the use of appropriate technology and now provide technical advices on good training, management, planning and support.

Ecatu should assist and facilitate training, funding and technical support to entrepreneur's aspiring to set up block yards. ECATU should provide advice on appropriate technology for block yards (Conventional or non conventional).Ecatu should set up appropriate partnerships to help facilitate housing delivery. Ecatu should consult Hydraform, CSIR Agreement board and NHBRC for technical advice.

Outcomes from the Commissions

a) Efficacy and sustainability of the ECATU brick.

ECATU should conduct continuous awareness raising in the communities, establish viable co-operatives (community structures) and organize accreditation for training. ECATU should also come up with models for sustainable integrated rural developments (e.g. Mhlontlo development initiative) in the creation of sustainable human settlements

b) Delivery of housing in Eastern Cape

ECATU need to market himself to the relevant departments and municipalities. Successful piloted projects and lessons learnt should also be documented in order for knowledge shearing with other stakeholders. ECATU must also convince technical experts e.g. Public Works for acceptability of the brick.

Proposed Partnerships

ECATU should form partnership with Housing Department, Local Government and Traditional Affairs, Public Works (for acceptability of the bricks), SMMEs, Education, Health, Co-operatives, F.E.T. Colleges, Higher learning institutions (built environment), Development Agencies e.g. Ntinga, ASGISA, Hydraform, Women in Construction, ECDC, NHBRC, Construction Industry Development, Research institutions e.g. CSIR (built environment). Must also organize interested technical expertise e.g. Mr. Mpahlwa, public works and people retrenched from mines or construction industry.

ECATU bricks can be used to construct Toilets, housing, schools, churches, hospitals, office blocks, walling, piggery structures etc. Work with municipalities, for low cost housing. Advantages of using ECATU bricks is manufactured on site which means no transportation costs, environmentally friendly, local resources, less water, local labor and saves time, less mortar used, easy to transfer technology, easy to monitor production, quick in production-minimum=1500 blocks per day, less bricks used per structure (37 blocks per square meter versus 110 conventional bricks and thermal advantage. Unfortunately this technology contributes to soil degradation (soil selection), it uses expensive machine, consume lot of time in training and is labour intensive (needs six people to operate).

4.8 APPROPRIATE TECHNOLOGY (AT) AND RURAL DEVELOPMENT

This topic was presented by Professor Luswazi, the director of Center for Rural Development at Walter Sisulu University (WSU). She is also a board member at ECATU and is thus familiar with the history and current status of this organization. The presentation started by asking delegates “what comes to mind when we talk of Appropriate Technology” and the responses were:

- Natural resources at my disposal that can be used efficiently to produce better result
- Basic home based products e.g. medicinal plants
- Energy efficient;
- Technologies that sustain/ improve human dignity
- Recycling of products
- Need driven technology

Prof Luswazi made reference to a trip she once made to Australia where they were shown what was perceived as a very 'high tech farming system' only to find that this is the kind of farming system she grew up seeing. This is just one example that shows how rich our indigenous knowledge is and yet it is not always adopted in rural development initiatives.

According to the speaker, a technology must be connected to the place, resources, economics, culture and impacts of its use in order to be appropriate. An appropriate technology is one that uses natural resources at one's disposal in order to produce better result such as medicinal plants. Furthermore, AT requires fewer resources, is easier to maintain; has lower overall cost; has less impact on the environment compared to highly industrialized practices; associated with developing nations or less developed rural areas of industrialized nations. Finally, AT's are associated with labour – intensive solutions over capital. Intensive as they are, yet they must retain human dignity.

Prof Luswazi made emphasis on using local materials and capacitating communities quoting an example of housing project in Cape Town where communities build houses using 'sand bricks'. This would enhance ECATU's technology of soil cement bricks.

Goals of Appropriate Technology:

- The development and transformation in and with communities
- Improve quality of life and income generation
- To develop and elevate the standard of living through research

Outcomes from the Commission

This section will reflect the discussion as they occurred in the AT & rural development commission, and the questions reflected on the terms of reference will be addressed as follows:

a) *Understanding the definitions of poverty in relation to rural development*

Definition of poverty is limited as it separates rural and urban areas whereas these areas affect each other. The wealth distribution is not even and hence the rich are becoming richer and the poor becoming poorer. There is a tendency to associate rural areas to black people and poverty whereas this is not always true because there are some rural areas where people are doing well especially those that have well established municipalities

Rural areas are rich in natural resources for example there is land that is lying fallow in the Eastern Cape and yet people are poor. Indigenous knowledge is neglected together with the traditional value systems of Ubuntu. Some of the middle class citizens have done well though they are staying in rural areas (built big houses)

Some of the major contributors to poverty include high inflation; poor service delivery in rural areas (e.g. health and education facilities); high prevalence of HIV/AIDS; poor exposure to information and food crisis.

Some of the government's interventions (e.g. grants) have worsened the problem of dependency. After the retrenchment of men from the mines, they came back and 'waited' for another job instead of working the fields!

b) *Provincial Milestones with regards to rural development*

Infrastructure projects were delivered faster than those that targeted at individuals, for example roads and electricity. Agricultural facilities have been made available for households eg dipping tanks; shearing sheds and water taps. Extension of government t to the people has been successful, however, some of the government interventions have not been fully benefited the communities due to challenges such as corruption; lack of interest and involvement of people.

c) Government programs that have generated need for further research

Here are some research areas that ECATU could engage in: land redistribution program; need for 'model' cases in rural development interventions and pilot projects that have succeeded and failed

d) Gaps in rural development

Presently, there is no rural development strategy at policy level. Flow of information is also a problem in rural development and lastly there are no models of appropriate technology that can be adopted and duplicated (e.g. RDP houses are not appropriate)

e) Proposed ECATU projects

ECATU needs to partner with other organizations to have a bigger impact in rural development (Community Private Partner). In addressing the issue of retrenchment or unemployment, ECATU could identify companies that are about to retrench staff (e.g. mines; car manufacturing; welding) and offer to train those people and capacitate them on its

appropriate technologies. In addressing the issue of housing shortage, ECATU could facilitate projects of human settlement into areas where there are facilities and resources.

Proposed Partnerships:

ECATU was invited to ensure that Appropriate Technology forms part of innovative models of Integrated Sustainable Rural Development which address all aspects of development simultaneously drawing from a wide variety of development agents. An example of missionary schools was made, wherein a school would have health facilities; sports facilities as well as religious facilities. This was seen as an effective way of bringing about rural development that would make tangible impact in people's lives.

ECATU was also encouraged to develop models for improving rural development, whereby it would package all its technologies in a 'basket' and thus make a bigger impact in communities. Indigenous Knowledge Systems (IKS) would form a big part of these development models. Prof Luswazi as the director of Centre for Rural Development had a few projects/ ideas that she would recommend to ECATU. These included an invitation for ECATU to partner on Mhlontlo Pilot and take on piloting of AT in 10 villages on Appropriate Technologies and assist the municipality to deliver. The partnership will be in built Environment, Bio Sciences, Material Sciences and Rural Infrastructure ECATU was also invited to participate in the research projects of WSU/CRD and CSIR. To collaborate with WSU/CRD on Indigenous Knowledge Systems programme.

WSU in partnership with CSIR also invited ECATU's involvement in writing for the Rural Development Journal; developing a Rural Portal (Website) and the Public Lecture Series. ECATU was requested to lead the commission on Appropriate Technology of the Annual Rural Development Conference that is hosted by WSU. ECATU was even encouraged to influence WSU's academic programs by forming part of the steering committee and join this university on international trips as they are very educational. ECATU was encouraged to formalize its partnerships with other organizations by signing MOU. Institutions of higher learning such as Walter Sisulu University (WSU) and the University of Fort Hare were identified as the key strategic partners when it comes to researching appropriate technologies.

5. RESEARCH AGENDA RESOLUTIONS

The research agenda presentations focused on the subthemes highlighted as follows: alternative energy, food security, knowledge management, water and sanitation, basic infrastructure, appropriate technology and rural development and lastly the Integrated Sustainable Rural Development. Here are some of the resolutions developed during presentation discussions and the commissions for adoption and implementation by ECATU.

Alternative Energy

On alternative energy ECATU can embark on Biomass, Wind Turbines, Solar and batteries & Biogas. ECATU will have to ensure that the energy solutions are economically appropriate for communities and that they are culturally acceptable to ensure community participation. A community pilot for Biogas has been identified as the flagship project that ECATU will focus on in the coming financial year.

Food Security

There is a need to revive agriculture through Organic farming and pilot in communities, upscale organic farming, Research in developing organic fertilizers and quality to be emphasized for small scale farmers. It is also imperative to consolidate past projects, lessons learnt and document those translated in understandable language. The key focus of such a publication should be on processing and preservation of agricultural projects. ECATU should also facilitate community access to Appropriate Technology (AT), which address changing climate and have AT variety.

Community Cooperatives

ECATU has to be clear if it is involved in development or improvement of existing cooperatives. ECATU needs to work with co-ops movement and facilitate the market for them. ECATU Should provide training on product developments long term monitoring and encourage joint movement of co-ops in the province in order to sell and buy from each other. On funding, ECATU should liaise with cooperatives that have received government funds. A consolidated effort to package technologies and training on such should be prioritized.

Knowledge Management (KM)

On Knowledge Management focus to be on disseminating the right information to the right people at the right time to enable decision making process. It (KM) focuses on 70% people, 20% processes and 10% technology. ECATU should develop its own database in a form of Indigenous Knowledge Systems-reservoir of knowledge. The CRD of WSU will be partnering with ECATU in this regard. Dissemination and presentation of researched information is to be simplified, materials to use local language and visuals (pictures).

Water & Sanitation

There is a need for adaptation for physically disabled persons in all sanitation technologies. The following water technologies were suggested for ECATU: Roundabout, Hippo water roller, Hand pumps, Spring protection, Solar water disinfection, Diesel/electric , pumps (protection from stealing), Gravitation water system, Rain water harvesting(NB), Water milking(mist/fog harvesting), Desalination(sea water), Grey water recycling, Tube well(fir single family use) and Surface water harvesting. For sanitation the following

were suggested: Urine DV (dry box), enviro loo, Composting toilet and higher levels of VIP. Guidelines from the DWARF have been made available and technical guidance was committed by the department towards the implementation of some of the above technologies.

Basic Infrastructure

ECATU should reflect on its resource base and be able to focus on what it can do, streamlining the ECATU brick and other basic infrastructure projects will help ECATU to have a distinct identity as a brand and it should use research to back up the policy advice. Possible projects for ECATU: human settlements; food preservation. ECATU will distil and pick those projects that can become flagships and conduct continuous awareness and training amongst communities.

Appropriate Technology and Rural Development

ECATU should link appropriate technology with rural development by leading the appropriate technology commission during the WSU annual rural development conference. ECATU should be a member of a steering committee at WSU to influence academic programs. It should concentrate on government programs that have generated need for further research such as land distribution, need for model cases and pilot projects that have succeeded and failed. It also needs to move away from a project – based approach, as impact is minimal. ECATU will in this manner be able to define what an AT is as well its dissemination to community level.

Integrated Sustainable Rural Development (ISRDR)

On ISRDR ECATU should re-look the appropriateness of the rural development definition. ECATU should ensure that Rural Development Strategy (RDS) put more emphasis on agrarian reform. For agricultural development land reform is to be emphasized. ECATU should develop technologies that will enhance the drive towards rural development, and continue its participation in the strategy development as part of the secretariat.

6. PROCESS FLOW

Compiled document reflecting resolutions from commissions to be circulated	20 March
Internal action plan will be developed to follow up on commitment by delegates	
Engagement with Research & Innovation Committee - That committee will then appointed a Research Working Group of substantive and methodological experts to prepare an agenda which would address research questions raised	31 March
Research Working Group will be formalized and terms of reference will be developed	April

Broader Stakeholder Forum will interact with draft to give input	May
Draft Research Agenda document for adoption	June
Resource mobilization for planned Projects	July
Implementation of planned projects	August
Follow up research agenda (annually) to review the progress	2009/10

7. CONCLUSION

Various speakers presented on socio economic issues faced by the Eastern Cape. Some of the highlights were on finding alternative energy technologies relevant for the communities. As much as solar energy was discussed, it poses challenges of affordability for the poor therefore it does not appear to be an appropriate solution. Hence ECATU is embarking on biogas. A thorny issue discussed was also the provision of basic needs such as water and sanitation, basic infrastructure and food. For each category partnerships were identified, and potential projects were proposed.

It was established from the discussions that ECATU can play a major role in rural development for Eastern Cape using its appropriate technologies. To achieve this, partnerships will be forged with the organizations that pledge their contribution. The research agenda emphasized the need for ECATU to align appropriate technologies with community needs to eradicate poverty.

Some of the key suggestions outlined from resolutions include the following:

- As stated in the above, ECATU is encouraged to partnership at different levels to be.
- Appropriate technology has to be integrated to ISRD
- Innovations to be affordable, accessible, environmentally friendly, culturally acceptable
- Review strategies for cooperatives and organic farming

COMMITMENTS EMANATING FROM THE RESEARCH AGENDA

COMMITMENT	ORGANIZATION	ECATU FACILITATOR	START DATE	END DATE
Facilitating internship programme (this does not include funding the process)	DBSA	HR Manager	01 April 2009	Ongoing
Installation and training of database hosting socio economic data (e.g. water & sanitation backlog data)	STATS SA	Knowledge & Research Manager	01 April 2009	Ongoing
Information on research done on the use of ICT in rural area & e-inclusion	RULIV	Knowledge & Research Manager	01 April 2009	Ongoing
Concept paper on :	UFH	Ms B Kubheka)	01 April 2009	28 April
<ul style="list-style-type: none"> • Food security and Organic farming • Community training on food processing and packaging technology 				
Concept Paper on:	DWAF	Mr Mlomzale)	01 April 2009	Ongoing
<ul style="list-style-type: none"> • Water harvesting on household level. • Site Visit to KZN Project 				
Technical guidance towards implementations of some of the water & sanitation technologies. DWAF for information dissemination	DWAF (Ms Machimana to facilitate)			
Handbook- the original blue book	CSIR	Knowledge & Research Manager	01 April 2009	Ongoing
Handbook of Appropriate technologies	Tsogang (Mr John King)	Knowledge & Research Manager	01 April 2009	30 October 2009
Action Plan for registration with NHBRC and certification Certification	Relevant Stake holders	Project Manager	Immediately	Ongoing

Technical advice on infrastructure (built environment)

Hydraform

Knowledge Management (IKS) Research Partnership Contribution to rural development portal Active participation in public lecture	WSU (Prof Luswazi)	Knowledge Manager	01 April 2009	Ongoing
Participation in Mhlontlo Pilot	WSU	Executive Manager: R & D	01 April 2009	Ongoing
MOU	WSU	Business Development Manager	01 April 2009	Ongoing
ECDC	Yogi	Business Dev Manager	01 April 2009	Ongoing
NMMU Biogas Pilot – steering committee		Business Dev Manager	01 April 2009	Ongoing

OTHER PROJECTS WORTH EXPLORING

COMMITMENT	ORGANIZATION	ECATU FACILITATOR	START DATE	END DATE
R50m set aside for cooperatives in the year 2009/10	DEDEA	Business Development Manager	01 April 2009	Ongoing
5% set aside for cooperatives	Provincial government	Business Development Manager	01 April 2009	Ongoing
Incentive grants for Coops	DTI, RULIV & Thina Sinako	Business Development Manager	01 April 2009	Ongoing
Siyazondla Homestead food production	Department of Agriculture	Business Development Manager	01 April 2009	Ongoing
Information compiled through pilot projects	Local municipalities, ASGISA, CSIR, ECDC	Researchers	01 April 2009	Ongoing
Technical advice for - Alternative Human Settlements (built environment)	Architect Luyanda Mpahlwa	Project Manager	01 April 2009	29 May 2009
Ilima	Department of Agriculture	Knowledge & Research Manager	01 April 2009	June
Natural building system Agriculture	ECDC	Business Development Manager	01 April 2009	-