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UNDP GEORGIA ICTs FOR DEVELOPMENT STRATEGIC FRAMEWORK

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I. Framework for Action

A. About this Document

For many years, the Georgia office of UNDP has been involved in projects fostering capacity in and the deployment of information and communications technologies, or the facilitation of their use within other development activities. The Country Office is now seeking to focus its ICTs for Development (ICTD) programmatic activities on strategic interventions that will have a maximum downstream or demonstration impact, and on the systematic mainstreaming of ICTD tools within its other programme areas.

The Resident Representative has therefore requested the support of the BDP ICTD Policy Advisor based at the SURF in Bratislava to help develop this ICTD Strategic Framework jointly with the Country Office staff (see Mission TORs in Annex 1). A mission was therefore organised from the 2nd to 13th of April 2002 in Tbilisi, conducting a series of interviews with key stakeholders (Annex 2) and discussing the main axes of the strategy proposed in this document.

This report should be finalised with the Country Office staff involved in the mission and cleared with management, in view of being promptly and broadly circulated among ICTD stakeholders in the country, particularly those met by the mission and including government agencies, civil society organisations (CSOs), NGOs, private sector businesses, donors and other multilateral agencies.

B. ICTs for Development

UNDP Georgia is hereby proposing a framework of action in the field of information and communication technologies (ICTs) for development. This framework is not about ICTs, but about development: it focuses on using ICTs to facilitate information sharing and knowledge building, both crucial materials in building the capacity of all agents, in all spheres of activities, to choose and act more efficiently and effectively towards sustainable human development goals.

On the scale of the Human Development Index, Georgia ranks among the middle countries near Macedonia, Colombia, Mauritius and Libya.¹ While 1996-97 witnessed GDP growth rates of approximately 10 percent, Georgia has since then faced a severe recession, with a growth of less than 2 percent in 2000, nearly 60 percent of the population living below the poverty line, and increasing differentiation.²

UNDP's programme in Georgia is based on the second Country Cooperation Framework (CCF), covering from 2001 to 2003. In line with the policy objectives and priorities of the government, UNDP focuses its programming activities in two areas: improved economic, political and social governance; and poverty reduction through advocacy and support to equitable economic growth.³ The advocacy of sustainable human development, gender equity, the environment and sustainable management of natural resources remain integral components of UNDP programming.⁴ Between 1997 and 2002, 75 percent of UNDP resources (a total of approximately \$16 million) have been

¹ UNDP Georgia, [National Human Development Report 2000](#).

² UNDP Georgia, "The UNDP Office in Georgia: A Center for Sustainable Human Development", March 2001. UNDP Georgia, "Second Country Cooperation Framework for Georgia (2001–2003)", January 2001.

³ UNDP Georgia, "Second Country Cooperation Framework for Georgia (2001–2003)", January 2001.

⁴ UNDP Georgia, "The UNDP Office in Georgia: A Center for Sustainable Human Development", March 2001.

spent on governance, 14 percent on poverty alleviation and economic growth, 8 percent on environmental protection, and 3 percent in other thematic areas.⁵

It is in view of those strategic objectives and activities that the use of ICTs for development purposes is hereby conceptualised and programmed. While in no way offering a panacea to transition and development difficulties, information and communication technologies do constitute potentially powerful tools of information sharing, knowledge building, and human as well as institutional capacity development. When used in appropriate ways, ICTs can impact, in turn, on all other fields of development work, empowering people to make better choices through increased information flows and access at much reduced costs, enabling broader education and the continuous building of knowledge. ICTs can also facilitate existing social networks through more extensive horizontal sharing of information and coordination of activities. This has a direct impact on poverty reduction, basic healthcare, education, economic emancipation, as well as political empowerment through transparent and participatory governance.

Some important steps have been taken toward developing ICT infrastructures in Georgia, and an increasing number of people are computer literate. Yet, in a context of economic transition, Georgia has still a long way to go for adopting ICTs as pervasive and efficient tools through its development activities. On the one hand, the telecommunication infrastructure is still of very limited reach and antiquated, particularly beyond Tbilisi and a few other major towns. Teledensity remains at around 11 percent, with a low rate of increase since 1990 and very poor quality of lines with only 10 percent of circuits being digital.⁶

Despite recent and large deployment of GSM services over much of the inhabited areas of the country, mobile telephone remains very expensive for most users.

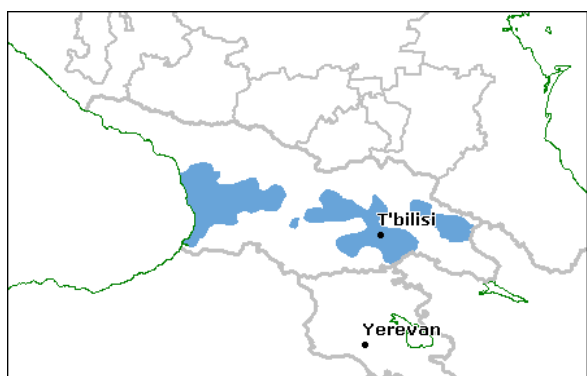


Figure 1. GeoCell Coverage, March 2002.⁷

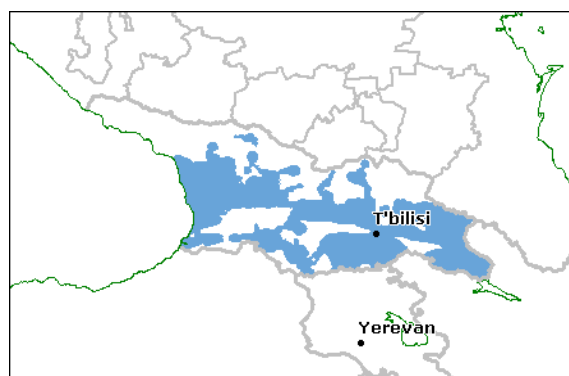


Figure 2. Magti Coverage, March 2002.⁸

With respect to the Internet, access to it is now relatively common in Tbilisi, notably through institutional and public access points. Donor programmes such as the EU INTAS and NGOs such as OSI, the Eurasia Foundation and IREX have provided resources and training to establish academic connectivity and Internet cafés.⁹ Yet, as of 2000, the extent of Internet services and use in Georgia, with 0.4 percent of the population having access, is still far below that of Russia (1

⁵ UNDP Georgia, "The UNDP Office in Georgia: A Center for Sustainable Human Development", March 2001.

⁶ Center for Democracy and Technology, "Bridging the Digital Divide: Internet Access in Central and Eastern Europe", <http://www.cdt.org/international/ceeaccess/countrydetail.shtml#georgia>.

⁷ Source: GSM World, http://www.gsmworld.com/roaming/gsminfo/cou_ge.shtml

⁸ Source: idem.

⁹ Center for Democracy and Technology, "Bridging the Digital Divide: Internet Access in Central and Eastern Europe", <http://www.cdt.org/international/ceeaccess/countrydetail.shtml#georgia>.

percent) or Armenia (0.9 percent),¹⁰ while IT equipment remains very expensive in relation to average incomes.

Human resources have great potential, with high levels of literacy, professional education and expertise, which however need to be better linked to the nascent information sector. There is, for example, a great lack of system administrators and network engineers,¹¹ while the universities can barely enrol one tenth of the applicants for careers in the field of information technology.

On the other hand, the country is in the process of developing the policy environment that will enable the use of ICTs for development. The telecommunication sector has been de-monopolised, policy-making, regulation and authority and implementation have largely been separated, and a number of relevant legal acts are currently being formulated, including on electronic documents, digital signatures and electronic commerce.

The potential of ICTs to improve processes of governance and to enhance their transparency and accountability, as well as address the needs of information flows and knowledge building in all other fields of development, has therefore started, but largely remains to be implemented.

C. The UNDP Agenda in ICTD

UNDP Georgia has been involved in ICTD activities since 1997 when it established a management information system for the State Chancellery (the presidential office) and the Ministry of Foreign Affairs. Since then, other state agencies and one regional government have been or currently are supported by MIS implementation.

The basis infrastructure for e-government services is therefore in place. Yet, this basis needs to be further developed, particular in terms of content, applications, and user capacity, for its potential to be fully exploited. Government services that could be provided or facilitated electronically, such as those related to social security, unemployment benefits, micro-credit opportunities, driver's licenses, taxations or passports, remain inaccessible electronically.

After five years of pioneering and building its expertise with those interventions, UNDP now seeks to focus its ICTD activities, as in all fields of intervention covered by the Country Cooperation Framework, on where the organisation has a comparative advantage and a chance of making a significant difference. The programme of ICTD intervention presented in this document therefore engages UNDP Georgia to support upstream capacity development of a number of actors for human and institutional capacity building, the development of relevant content in both e-governance and other sectors of public utility, and the piloting of innovative concepts to ensure universal access to information and knowledge-building resources.

This will initially imply only a few stand-alone upstream ICTD projects that are strategic to that field and address the above objectives, and mostly implement ICTD activities as mainstreamed components of other UNDP programmes. In particular, the Organisation will contribute to developing capacity-building tools, identify and facilitate information content relevant to development in Georgia, and pilot connectivity and information sharing in remote and potentially conflict areas.

The approach taken and to be further developed by UNDP Georgia fully embraces the global priorities set by the organisation at the global level in its final report of the Digital Opportunity Initiative, [Creating a Development Dynamic](#) (July 2001). The DOI report identifies ICTs as a catalyst for development, focusing project initiatives on mainstreaming within UNDP's five other practice areas (democratic governance, poverty reduction, crisis prevention and recovery, energy and environment, and HIV/AIDS) and underlines its role in upstream policy advice and the

¹⁰ International Telecommunication Union (ITU), http://www.itu.int/ITU-D/ict/statistics/at_glance/

¹¹ Center for Democracy and Technology, "Bridging the Digital Divide: Internet Access in Central and Eastern Europe", <http://www.cdt.org/international/ceeaccess/countrydetail.shtml#georgia>.

promotion of innovative infrastructures, content and capacity building, and the promotion of ICTD-relevant private and civil society initiatives. The UNDP Georgia approach is to take advantage of the relatively favourable policy environment to emphasise innovations and take an exemplary lead grassroots access, capacity building and content development.

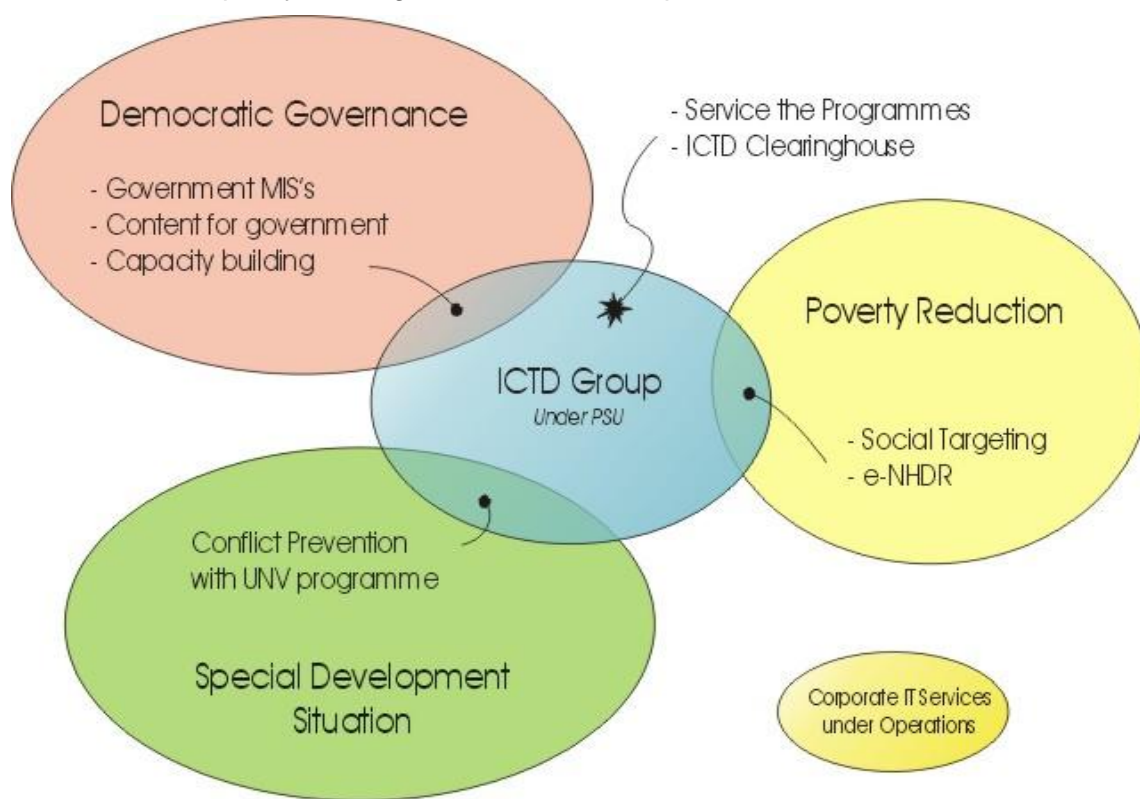


Figure 3. UNDP Georgia Programmes and ICTD

Figure 3 illustrates the overlap of CCF and ICTD priorities, and distinguishes between mainstreamed and stand-alone interventions as discussed in this framework. The overlapping areas of the circles therefore highlight the country's development priority, as identified by the CCF, where UNDP also has a niche of expertise in ICTD. This is where the mainstreaming of ICTD activities into other UNDP practice areas can offer a strong synergy and likelihood of maximum developmental impact.

D. Resource Mobilisation Strategy

Detailed resource mobilisation strategies are discussed alongside the respective recommendation for each activities presented in this report. As a general approach however, two recommendations are made in this respect:

Recommendation 1: In view of the still difficult funding situation for ICTD programming, the short-term strategy for resource mobilisation may need to consider attracting several small contributions from a large number of donors.

Recommendation 2: Furthermore, funding for ICTD activities is already earmarked and can be further mobilised as part of mainstreaming ICTD activities within other UNDP practice areas. The UNDP CO should also ensure that any upcoming programme and project design systematically includes mainstreamed ICTD components. This should not include only information technology equipment, software, networking and connectivity, but also awareness, training, institutional capacity building, policy dialogue, information needs assessments, content development, and information management tools.

II. UNDP Georgia ICTD Framework

The discussion below is structured by sectors of UNDP intervention in Georgia. It briefly reviews previous or current ICTD activities undertaken by UNDP programmes, (Democratic Governance, Poverty Reduction and Special Development Situation). The report then discusses possible areas of new activities or consolidation of existing ones under an ICTD service unit. Figure 3 summarises, in the form of a mind map, the articulation of ICTD programme components and stand-alone projects to be discussed below.

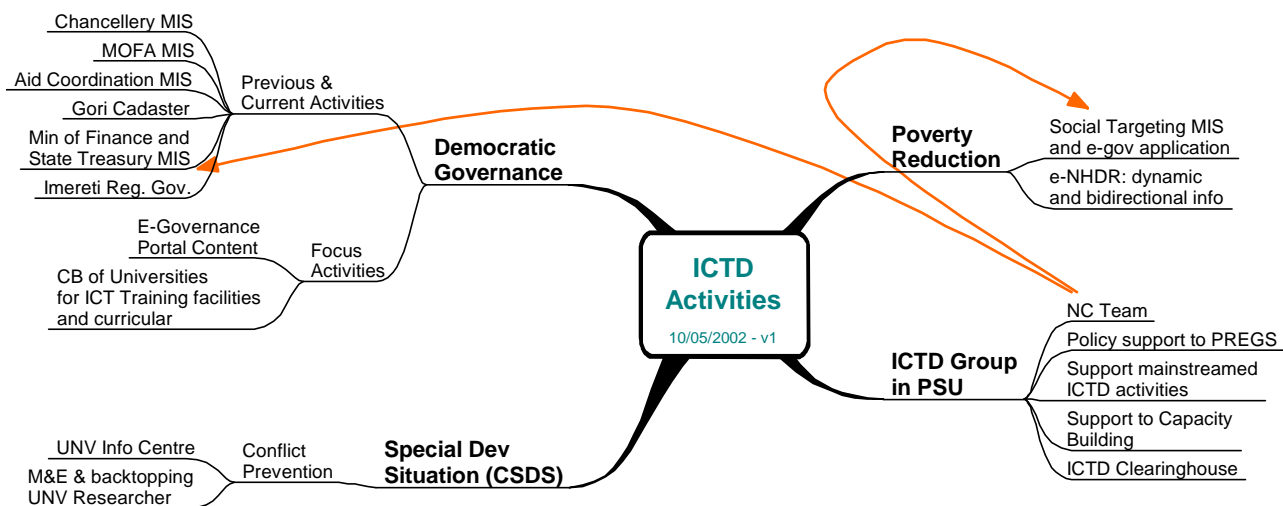


Figure 4. Articulation of ICTD Activities

A. ICTD and Democratic Governance

1) Strategic Significance

ICTD activities in the field of democratic governance address issues of access for policy makers and civil servants, managerial and executive capacity development, and relevant content building, notably in view of developing e-government services. These services, in turn, can contribute to improve transparency and accountability of various governance processes, reducing rent opportunities throughout the public service. The intervention also serves as an upstream awareness process, sensitising policy makers and civil servants to the potential of ICTs in overall development activities and supporting the implementation of an enabling legal environment conducive to the use of ICTs for development purposes, including the generalisation of access to government information sources.

2) Current Activities

Most of the past and current ICTD projects by UNDP in Georgia were and are associated with the Democratic Governance Programme. The DGP has dealt with the modernisation of public administration and the consolidating the rule of law through anti-corruption measures and support to constitutional courts. The Programme also promoted human rights, including gender equity. To build governance capacity in decision making and information sharing, UNDP has assisted, since 1997, five government institutions with the analysis, design and deployment of management

information systems (MIS). Those institutions are the State Chancellery (the Presidential office), the national Aid Coordination Agency, the Ministry of Foreign Affairs, Ministry of Finance and State Treasury of Georgia and, currently, the government of the Imereti region.¹²

3) Focus of ICTD Components

a) National ICT Strategy

The lack of an enabling ICTD policy environment can pose serious obstacles to the advancement of the field and its potential implications for all other developmental activities. To address this issue, the UNDP Georgia CCF explicitly intended to “help the Government to elaborate a national information policy framework which is expected to direct policy formulation and adoption on information access and exchange” (paragraph 29).

However, in view of the current situation in Georgia, for the CO to support a high-level policy process does not appear to be the most opportune niche. There are at least three reasons for this:

- On the one hand, the current policy environment is said to be acceptable by the stakeholders that the mission has met. Respondents from government agencies, CSOs, and the private sector (both ISPs and IT companies) have indicated that current regulation were generally not obstructing their development initiatives.
- On the other hand, there are ongoing systematic efforts by several agencies in the government to enact policies that will enable further use of ICTs in all productive and development spheres. Such efforts include a draft law proposal from the State Department of Information Technology,¹³ which will provide for the legalisation of electronic documents and signatures, and establish the basis of e-commerce. This initiative should lead to the adoption of a number of regulatory tools by the second or third quarter of 2002. As part of this policy formulation process, the Department has also conducted a preliminary e-readiness assessment. In general terms, an e-readiness assessment can allow to identify the state of the sector, the limitations and challenges posed to the use of ICTs for development, and the resources and opportunities that can be build on. The existing study has provided the Department with the data most needed for the formulation and completion of its ongoing policy formulation exercise.
- One additional factor to take into consideration is the unclear functions and authority associated with the ongoing policy formulation process, which would make it difficult for UNDP to define and maintain a non-controversial role vis-à-vis all key actors within various branches of the government. These players include the State Department of Information Technology, the Ministry of Transport and Telecommunication, and the National Communication Commission.

Recommendation 3: As a result of the above factors, UNDP does not need, nor would likely be able to contribute much, to the development of the national ICT strategy. It is therefore advisable that UNDP focuses its activities the other fields of its ICT priorities and niche.

A possible exception to the above hand-off approach to policy formulation process might be for UNDP to ensure that the Poverty Reduction and Economic Growth Strategy (PREGS) process recognises ICTD as a field to facilitate information flows and knowledge building. This particular activity is discussed below in the ICTD and Poverty Reduction section.

¹² A very favourable evaluation of those projects was conducted by UNDESA in October 2001, “External Evaluation Mission: GEO/96/005 and GEO/96/014” by Jeanne Marie Col, Team Leader, and Demetrios Argyriades, Consultant.

¹³ Law of Georgia on E-Document, E-Signature, E-Deal and E-Commerce, April 2002, State Department of Information Technology.

b) E-Government Portal Development

A number of initiatives have now established the backbone of a state-wide management information system. Much remains to be done in infrastructures and capacity building, but one of the key activities that will now ensure the full utilisation of the deployed systems, as well as demand and resource allocation for more deployment, is the building of relevant electronic governance content, both among government agencies and between them and institutional clients or private citizens. In turn, a regulatory framework with respect to e-governance is currently under development by the State Department on IT, whose intention is to progressively increase the proportion of electronic information created and held by state agencies.

A strategic contribution by UNDP in the field of e-governance content might therefore be to support government counterparts in establishing the necessary tools, guidelines and capacity for such electronic document handling, including:

- Providing guidelines on information audits and needs assessments for government agencies themselves, their other government clients, as well as external users including citizens and the private sector;
- Support to curricular development and training programmes to increase the capacity of government agencies in electronic information management and packaging, in view of populating the e-government portal (including publishing on CD-ROMs for distribution beyond the reach of the Internet).

Recommendation 4: Once the UNDP CO has additional programming capacity in ICTD, it could identify suitable counterparts in the field of government information management, and work with them to develop a project that would either establish or preferably consolidate an existing e-governance portal. The project would focus on the activities discussed above (needs assessments and capacity for training) and other priorities identified by the needs assessments.

Recommendation 5: Support to curricular development and training programmes (including equipment and the training of trainers) could be provided to recognised educational institutions, notably technical and management universities, for them to implement the training programme of civil servants and policy makers. Computer laboratories may need to be established or upgraded, while curricular should be adapted to the needs of the various clients, and include, beyond basic computer literacy, issues of relevance to e-governance policies and implementation such as electronic document regulations, information management, privacy and security. For that purpose, see the narrative and recommendation on Capacity Building presented in the ICTD Support Unit section below.

Funding 1: The above-mentioned project proposal could be submitted to the Democratic Governance TTF or directly to interested donors in the fields of governance, transparency or public information. Request could also be made to Service Line 3 of the ICT TTF (e-governance), but the availability of funds is likely to be limited for the foreseeable future.

B. ICTD and Poverty Reduction

1) Strategic Significance

UNDP intervention in the field of poverty reduction focuses on three programmes: an improved system of social targeting that supports the reduction of poverty levels; increased public awareness of poverty issues and civil-society involvement in policy-making; and an enhanced national capacity to broaden the country's productive base and levels of investment.¹⁴ In practice, UNDP is

¹⁴ UNDP Georgia, "Second Country Cooperation Framework for Georgia (2001–2003)", January 2001.

therefore cooperating with the World Bank and the IMF in supporting the government for the elaboration of the Poverty Reduction and Economic Growth Strategy (PREGS). "UNDP support will be provided in the form of technical expertise; assistance in establishing a database to monitor poverty indicators; and coordination of the consultative mechanisms set up to elaborate the strategy."¹⁵

The strategic role of UNDP's intervention on poverty reduction with ICTD initiatives can therefore be twofold, ensuring the strategic recognition of ICTD as a tool to fight poverty, and actually supporting the pilot use of ICTs for poverty reduction intervention by key government counterparts.

2) Focus of ICTD Components

a) PREGS and ICTD

As mentioned above, a first area in which UNDP may wish to provide policy advice in the field of ICTD might be to ensure that the PREGS process recognises ICTD as a relevant tool to facilitate information flows and knowledge building. There should be an explicit recognition that information is crucial to make better-informed choices by all, including the poor, thus empowering them economically through opportunities and politically through participatory democracy and good governance.

Recommendation 6: In the framework of its contribution to the PREGS, UNDP should ensure that its own ICTD staff, or with outside assistance, formulates relevant ICTD activities to be included and financed by the PREGS process. This could include conducting poverty reduction information needs assessments for all key poverty reduction stakeholders, and support content development from the results of such assessments and in line with the objectives and programme of the PREGS formulation and implementation.

Funding 2: This activity will most likely need to be funded as a component of UNDP's contribution to the PREGS process.

b) M&E Information System

As a second area of ICTD intervention in poverty reduction, UNDP can continue laying the foundation of e-governance, this time in the area of monitoring. This intervention will serve as example of what (and how) the government can accomplish with the mainstreaming of appropriate ICTs with respect to the registration of information relevant to its poverty reduction strategy in particular, but also beyond this in other fields of governance.

The formulation of a project for the monitoring of poverty indicators is now underway with the Department of Statistics. The proposal will be merging two previous proposals that separately dealt with poverty targeting and the monitoring of the UN Millennium Development Goals, and be submitted to the Poverty TTF for funding by May 2002. The system will possibly use DevInfo or another platform, since this already exists elsewhere.

Recommendation 7: Within this above project, UNDP should ensure that the Department of Statistics received sufficient support not only for the development of its MIS, but also and in parallel for a business process analysis and re-engineering of its current activities. This will be in view of integrating the new M&E function of the PREGS and MDG requirements within the Department of Statistics operations, and to build its capacity at disseminating produced information through e-governance tools.

Funding 3: The funding proposal to be submitted to the Poverty TTF should make sufficient provision for the above, most likely to be between 40,000 to 80,000 USD (although this

¹⁵ Idem.

needs to be more precisely assessed on the basis of the scope of the MIS and business re-engineering involved).

c) e-NHDR

The CCF has made a reference to public awareness regarding poverty reduction (paragraph 37), focusing on the dissemination of the national human development report (NHDR). The mission noticed that electronic versions of the NHRD are already available on the UNDP website. This could however be improved by testing innovative uses of ICTs for NHDR dissemination but also interaction with its readers and contributors.

On the one hand, such interactive tools could enable the NHDR team to better monitor the needs and use of the various readers of the Report. It would allow profiling at least part of the users, keeping track of the information they most need, which sections of the Report they most use, for what purpose, and what data or analysis could be improved in both nature and timeliness of delivery. On the other hand, the NHDR team could also use ICTs to improve dissemination not only of the annual end-product, but also of information being continuously updated or of analytical documents if and when available. The approach could also allow for much interaction between the NHDR team and its constituency, as well as among users themselves.

Recommendation 8: The Poverty Reduction programme could recruit a qualified national officer (on a national SSA or ALD, or NUNV if qualified and funds are limited), to:

- Conduct a needs assessment among NHDR users, and setup-up data-mining tools that will allow the NHDR team to monitor the use of the Report (by section, frequency, etc.), categories and interests of users, utilisation of the information found (policy, project formulation, etc.);
- Establish bilingual (Georgian and English, possibly other languages as required) online and interactive facilities to respond dynamically to the identified information needs. Such facilities could include mailing lists (including a Q&A forum), and web-based dynamic databases with frequent updates, electronic library for direct downloads, online surveys, calendar of events and for coordination of meetings, etc.) for coordination and exchange of documents between all NHDR stakeholders. The project should also consider a regular publication of web-based content on CD-ROM for dissemination to stakeholder with no or limited access to the Internet.

Funding 4: Funding is not yet available for the above recommendations. The CO would need to explore the possibility of seeking support from either the ICT TTF (with reservations already expressed), from the Poverty TTF, or alternatively from a source supporting NHDR activities (emphasising the innovative nature of the project).¹⁶ Funding from UNV sources could also be explored, in which case they would provide for labour and operational expenses.

C. ICTD and Conflict Prevention

1) Strategic Significance

UNDP has been involved in a number of activities related to conflict prevention, rehabilitation and confidence building in several regions of Georgia. Among others projects, UNDP innovated through its large-scale regional rehabilitation and development programme in the post-conflict area

¹⁶ Information in this regard has been requested from Andrey Ivanov, NHDR coordinator in Bratislava, but not yet obtained at the time of finalising this report.

of South Ossetia. It implemented dialogues for confidence building on mutual non-political interests between Georgians and Ossetians.

In addition, UNDP has been supporting the implementation of a UNV project funded by the UK (DFID) and mostly implemented through micro-grants. The project focuses on capacity building for conflict prevention, community development and confidence building, notably among local authorities as well as refugees and IDP organisations. Such activities include creating and working with local groups of facilitators and NGOs to improve conditions in communal centres and villages, rehabilitate vulnerable groups, and provide training in conflict prevention and human rights. The project is implemented in the ethnically mixed regions of Javakheti, Abkhazia, Western Georgia, and South Ossetia. Some activities take place in Tskhinvali, Shida, Kvemo Kartli and Tbilisi, mostly with representatives of the ethnic minority groups and the IDP communities.¹⁷

As part of such confidence building activities, the project has organised a children's peace camps, and has been publishing "White Crane", a children magazine that provides channels for communication of youth across communities.¹⁸ To date however, no other information sharing or ICTD activities have yet been undertaken in relation to conflict prevention by the CO and its Special Development Initiative programme. Yet, ICTs can have a direct impact on poverty reduction and conflict prevention at the grassroots, but must for this be appropriated by the grassroots themselves. ICTs must respond closely to the information needs and constraints of the most deprived social groups, among both the urban poor and small-scale farmers. Information networks and technologies must also identify and mould themselves on the capacities of and resources available to those groups, such as the talents and voluntarism of their youth or their oft long existing organic networks of information sharing and knowledge building. As a tool of the grassroots, ICTs are starting to show how they significantly contribute to knowledge, and with it empowerment in making economic choices and to participate in political decisions.

2) ICTD and Conflict Prevention Activities

To reach the above objective, public access facilities are crucial so that all sectors of the Georgian society are to benefit from the potential of ICTs in information sharing and knowledge building. In view of the successful commercial and civil society uptake of mainstream public access to ICTs in Tbilisi, UNDP can withhold from intervening in general terms and for the more affluent groups. In turn, the CO could pilot and showcase means of providing access to deprived social sectors, either of urban poor or isolated and subsistence rural communities. Such piloting should explore the appropriateness to the Georgian context of various remote access technologies, and the sustainability of community-based ICT ownership and management.¹⁹ As the focus of conflict prevention needs to be on confidence building and development in the affected areas themselves, the priority should therefore be to improve tools of information sharing for those communities first.

Such an intervention by UNDP could serve upstream for policy formulation in ICTD for conflict prevention, in Georgia and elsewhere, and downstream as a pilot to showcase the use of ICTs for both conflict prevention and poverty reduction, possibly inducing other organisations to undertake similar information and networking activities.

Recommendation 9: The CO could therefore undertake to consolidate the above initiatives with the identification of information needs of the various stakeholders and the deployment of appropriate ICTs that allow responding to those needs with relevant information and

¹⁷ UNDP Georgia, "The UNDP Office in Georgia: A Center for Sustainable Human Development", March 2001.

¹⁸ Communication with programme officer.

¹⁹ Such technologies have already proven robust and effective in very challenging situations elsewhere in the world. See notably UNDP-UNOPS project People First Network, Solomon Islands: www.peoplefirst.net.sb. Furthermore, OSI may have been involved in establishing a public access point in Abkhazia, which would need to be verified and assessed for its technological solutions and institutional arrangements.

horizontal means of peer-to-peer communication. At this stage, the formulation of a pilot project is therefore recommended. The project should provide for the following components:

- Conduct an information audit and needs assessments (IANA) covering all main groups among the stakeholder of the conflict prevention initiatives (communities, UNVs, government offices, NGOs, CSOs, donors, UN counterparts, others);
- On the basis of the IANA, assess if and how ICTs can be used to improve communication and information flows of the various stakeholders, identify relevant counterparts among those already engaged in UNV-UNDP projects, and design project activities. Care should be given to both appropriate technologies and institutional arrangements, ensuring participation and ownership through a recognition of the importance of information and communication;
- Support the creation of information and networking hubs within existing NGOs and CBOs at the regional and eventually district levels. The hubs would contribute to the creation, collection and dissemination of relevant information on conflict prevention and other development needs, but also to the facilitation of networking (both physical and electronic) between CSOs within a region. The establishment of the hubs should be within existing network of CSOs, and include computerisation and connectivity, training, content development, and networking facilitation. The Conflict Prevention team of UNDP should directly supervise the content and networking components, while the ICTD support group could ensure the supervision of technical project components.

Modality. The above connectivity programme could be tendered to one or several CSOs (IREX, OSI, etc.) who would implement the information and networking hubs with full ownership of recipient communities. On-going support should be provided for a limited period (1 to 2 years) after deployment through roaming technicians. OSI already has plans to deploy “e-riders”, a model that could be replicated or consolidated, notably through the use of national UNVs. At the community level, local youth volunteers could be recruited and trained by the above mechanism to operate and maintain the ICT equipment and provide services as part of the conflict prevention programme. They will then become both technical operators but also information intermediaries, as exemplified in rural use of ICTs for development elsewhere.²⁰

Deployment should be modular, allowing flexible expansion as much as funds are secured, and permitting other donors to contribute per units deployed, notably when centres are needed for specific initiatives in given localities.

Technology. The judicious assessment and use of appropriate ICTs will be necessary. In certain cases and for some time, ICTs without Internet connectivity could be justified, using CD-ROMs as primary medium. The project would then need to ensure that relevant content is replicated on CD-ROMs (with disk-based indexing and searching) and distributed as frequently as needed. High frequency (HF, or amateur bands) radio communication, micro-wave networks and upcoming low-cost bidirectional VSAT services should be explored for basic connectivity option in remote locations.²¹

Cost. If 5 to 10 sites are initially piloted for one year, an approximate budget would involve three national UNVs (20,000), one international technical advisor (3 months,

²⁰ See notably Curtain, Richard, “Promoting Youth Employment through Information and Communication Technologies (ICT): Best Practices Examples in Asia and the Pacific”, Prepared for ILO/Japan Tripartite Regional Meeting on Youth Employment in Asia and the Pacific, Bangkok, 27 February – 1 March 2002.

²¹ Minimal conditions to be met for the use of HF equipment are: open HF regulations and licensing; access to main power supply or sufficient solar exposition or other forms of local power generation; adequate location for HF propagation; possibility of developing Georgian modules for software interface, (WaveMail being the most likely application for HF control). For working model see Solomon Islands PFnet at www.peoplefirst.net.sb.

42,000), equipment for 10 sites (50,000), and support to for local volunteers and other expenditures (8,000) a total of \$120,000.

Sustainability and Phasing out. Once the information hubs are well established, including basic connectivity, it is expected that they will be able to self-finance the support to their volunteer, operational costs, and amortization of equipment through minimal user fees. This model is proving feasible even in very low-income and mostly subsistence conditions in the above-mentioned project in the South-Pacific. It remains to be seen however if the different conditions of Georgia would maintain the viability of this model or not.

- Also crucial to the project is the design and implementation of a comprehensive monitoring and evaluation system. This will allow a clear documenting and analysis of the processes, challenges and lessons learned from the pilot and of the testing of various technological and institutional arrangements.

Action 1: SURF to provide a review and guidelines on needs assessment methodologies once available (currently in development).

Funding 5: Some funding, possibly of \$30,000, for the above activities could be made available from the ongoing UNV project. Budget cycles are revised every 6 months, the next one starting in September 2002. Additional funding could be sought from UNV, while the Embassy of the Netherlands has expressed interest in the initiative. A mission is scheduled to review the Netherlands current and future assistance to Georgia in May 2002. Co-funding could also be explored with NGOs active in this field, notably OSI and IREX.

Expertise 1: Rafal Rohozinski, a leading expert in ICTD with much experience in the region (curriculum vitae submitted with this report), has expressed his interest in cooperating with an initiative linking conflict prevention in Georgia to the innovative use of ICTs. Rohozinski is currently conducting research on such issues with academic funding, and would be willing to support the project and its M&E components, in exchange for UNDP facilitating his field research. Synergies would be significant for both parties, and funding to support Rohozinski's activities could be sought under an international UNV or other modality that would cover his living expenses and activities.

D. ICTD and the Environment and Energy Programme

The UNDP Georgia office has had a number of activities in the field of environment and energy. To date, the programme has not undertaken ICTD components, beyond planning for capacity-building of the Ministry of Environment through the establishment of a communication and information network between the Ministry's central office in Tbilisi and its regional offices. Yet, as in other fields, information sharing and knowledge building is crucial to the work of government officials, professionals and civil society organisations working on environmental and energy issues. ICTs are among the tools that can be used to ensure dissemination and interactive exchange of information.

Recommendation 10: The Environment and Energy programme should formulate a project document and seek the necessary funding for implementing the above mention MIS and related capacity building, with the implementing support of the NC Team.

- The Programme should also work with its counterpart to ensure that their capacity is built with basic IT literacy, facilitation of mailing lists, webmasters, and information manager skills. The emphasis should be on the development of information content relevant to the objectives of the Programme, packaging needed information in relevant formats (languages and styles) and through electronic media (website, email distribution, CD-ROM copy of websites distributed by postal services for sites not having Internet connectivity yet).
- To best target the information content and the format of delivery (languages, styles, media), the Environment and Energy Programme should, as a component of the above

activity, commission an information needs assessment for each groups of stakeholders (government counterparts, energy and environment workers, CSOs, population affected by energy and environment programmes). Such needs assessment could be tendered among competent Georgian research organisations.

Funding 6: Considering the very limited funds available from the ICT TTF, it would be preferable to formulate a request for the above to the Energy for Sustainable Development or Environment Trust Funds.

E. ICTD Support Unit (proposed)

1) Strategic Significance

To successfully address critical ICTD issues in Georgia, there is a need for UNDP to undertake a number of upstream capacity building interventions as well as innovative and demonstrative pilot initiatives at the grassroots for poverty reduction and conflict prevention. Such interventions sometimes reach beyond the respective mandates and capacity of the existing UNDP programmes. Unlike the mainstreaming of ICTD components with those programmes as discussed above, it would therefore be justifiable for UNDP Georgia to build its own programmatic capacity in ICTD, and engage in a few selected stand-alone ICTD projects. This would also allow UNDP to consolidate its management of ICT components, avoiding redundancy across several programmes (as with connectivity, training and awareness activities), and rationalise the use of human and financial resources in this field. It would also ensure a clearer focus on UNDP's ICTD niche, i.e. where the organisation has a better chance of really making a difference.

The section below discusses the areas where UNDP Georgia could engage in stand-alone ICTD activities, notably supporting the inclusion of ICTD issues within the policy debate on PREGS, and managing or supporting the operation of a Clearinghouse on ICTD activities in Georgia to ensure coordination between key stakeholders at the national and regional level.

2) Stand-alone ICTD Components

a) Capacity Building

From the interviews conducted by the mission, it seems that there has been few initiatives to provide training to government officials in basic IT literacy, information management practices, and ICT-related administrative and legal issues. Several NGOs may have provided such training, but mostly to other civil society organisations.

Recommendation 11: In view of this significant gap, UNDP should consider building the capacity of key educational institutions for training in the field of ICTs, including a review of various methodologies and curricular relevant to the needs of Georgia.

Recommendation 12: UNDP could consider supporting the training of trainers on the basis of methodologies and curricular with delivery technologies and content adapted to each level of trainee within the civil service and civil society. Programmes should include basic training in IT literacy, facilitation of mailing lists, webmasters, and information managers, as well as ICT policy issues for policy makers, civil servants and CSO volunteers involved in policy making or lobbying. Material on some of those issues has already been developed and is available from various NGOs and academic or research organisation, notably OSI and IREX (IATP) and Bellanet (iTrain material: <http://www.bellanet.org/itrain/>).

Recommendation 13: Implementation of training programmes can be contracted to educational institution and civil society organisations. Technical universities and institutions could be supported for adapting curricular and upgrading computer facilities in several centres of the country.

Funding 7: Budget allocations for ICT training components could be partly secured from the use of training funds already planned within existing projects, particularly of the Democratic Governance Programme.

b) ICTD Clearinghouse

From the point of view of both Georgian organisations and UNDP staff involved in ICTD activities, there would be much to learn from exposure to other experiences at the policy and programme levels. This would be an important contribution that UNDP could make in the building-up of human and institutional capacity in the field of ICTD policies and programmes in Georgia itself, while enabling synergies to take place with similar programmes across the region. It would also facilitate the flow of existing relevant information produced for and by the region, notably from sources in the Russian language.

The main activities could be to publish a regular newsletter and maintain a bilingual (Georgian and English) "ICTD in Georgia" website and mailing lists to share information, documents and resources between all stakeholders of UNDP and other projects, as well as discuss various internal and external activities relevant to ICTD in Georgia. Stakeholders could include government agencies, CSOs (including user organisations such as students bodies, Internet clubs, etc), ISPs and other private organisations (notably the media), international NGOs, donors, and multilateral agencies. The CO will need to plan for adequate resource allocation if this is judged relevant. Issues to be addressed could include, among others:

- E-readiness information gathering
- Policy status and debates
- Resource library for training relevant to the Georgian context
- Analysis of donor resources and policies
- Tabulation and mapping of relevant activities by categories and regions

Such information management is however a very time consuming endeavour, and will require specialised and dedicated tasking.

Recommendation 14: *The UNDP CO should mobilise resources to cover a national UNV and technical costs of a newsletter and website for ICTD coordination in Georgia. This UNV could be hosted directly by UNDP, but preferably (for long-term national ownership) by a national CSO which would implement the Clearinghouse component.*

Action 2: *CO to hire an electronic librarian with some Webmaster skills to edit and facilitate information management in-house and for the projects.*

Action 3: *Once recruited, e-librarian to design and implement the Georgia ICTD Coordination website and electronic forums. SURF to provide methodology on the participatory design of the website structure and content definition.*

Funding 8: Mobilise \$10,000 per year for one national UNV with good communication and languages skills, and expenses for related activities. This request could be attached to other UNV activities or mobilised separately by the CO.

c) Investment Promotion in the ICT Sector

A few stakeholders have suggested that another activity by UNDP might be to foster the development of the ICT industrial sector (both software and hardware) by enabling IT foreign investment in Georgia. UNDP support could consist in facilitating an ICT Investment Forum, for which the Organisation is seen as a neutral disinterested party with the credibility necessary to inspire confidence and interest from international investors.

However, human resources of the UNDP CO in ICTD programming are too few at this stage to undertake such sectoral support along the other proposed activities. Furthermore, foreign investment in general has been timid in Georgia recently not so much for lack of knowledge and

contacts, but mostly due to an unfavourable climate plagued by corruption and an economic recession. Until these conditions improve, it is unlikely that an ICT Forum would succeed in attracting many investors or improve the conditions of the national IT sector.

Recommendation 15: It would therefore be advisable to keep this intervention as a possible contribution for the intermediate future, but on hold until further capacity is built and investment conditions improve. Once these conditions are met, UNDP could engage in supporting a Forum with the strategic objectives of discussing and proposing mechanisms to provide continuing institutional support to Georgian ICT companies, particularly of the SME sector, for capacity building in business management, marketing, and market information, and facilitation to link with foreign investors. In the preparation of the Forum, UNDP should also commission studies to:

- Discuss the conditions of production and distribution in Georgia (labour, management, upstream and downstream industries);
- Assess the needs of the Georgian IT industry, particularly of the SME sector;
- Describe and analyse the national and international market potential for Georgian enterprises; and
- Discuss previous experiences, successes and lessons learned from Georgian IT production and elsewhere with comparable conditions.

Funding 9: Once the CO is ready to seek funding for such activities, a number of organisations could be approached, including UNIDO (with interest for investment promotion in general); UNECE (which has conducted similar forums throughout Europe); USAID, IFC and WB may also be interested to co-finance the Forum, while the national private sector could contribute.

Expertise 2: A comprehensive study of the IT industry in Armenia, including conditions of production and trends, limitations and market potential, as suggested above, was conducted by a consultant familiar with both the South Caucasus and Central Asia. The study, "Armenia: The State of IT Industry: Findings of the Survey of Information Technology Enterprises," is available from SURF. Contact details of the consultant are: Ms. Viktoria Ter-Nikoghosyan, ICT Consultant, Kyrgyzstan phone numbers: (996 312) 66-13-16, mobile: (996 502) 57-80-04, email: tervika@mail.kg.

III. Management Arrangement

A. Information Technology and ICTD Support

Currently, the information technology needs of UNDP and other agencies of the Tbilisi UN House are managed by the PSU, and *de facto* merged with the programmatic oversight of the UNDP ICTD activities. This has most likely be the best arrangement until now, considering the lack of programme human resources dedicated to ICTD activities, and the need to flexibly allocate management on the basis of available skills.

However, in view of the increasing complexity and demand of the ICTD portfolio, this arrangement would probably benefit from being revisited. It will be important to ensure a transparent allocation and use of human and financial resources for, on the one hand, corporate information technology services and, on the other, programming activities in ICTs for development. Furthermore, the skills required by both sets of functions are increasingly distinct, the first requiring high degree of technical expertise with information technologies, both in hardware and software, network configuration and Internet protocols. The second, in turn, demands much less technical knowledge, limited to a general understanding of ICTs and information management practices, but an advanced training in the social sciences and solid qualifications in development programmes and project management. The following is therefore recommended to the Country Office:

Recommendation 16: The functions of IT services, that is equipment and software maintenance and upgrade, LAN management, Internet connectivity, Intranet and other workflow and data warehouse applications, corporate website technical maintenance, etc., should be assigned under the responsibility of the Operation Manager.

Recommendation 17: The design and implementation of ICTs for Development component of programmes, including policy support, capacity building, connectivity, content development and support to the national information technology sector, should be placed under the responsibility of the Programme Support Unit.

Recommendation 18: The maintenance of information content of the corporate CO website should be clearly distinct from the technical maintenance, vested in the IT support staff in the role of webmaster. The CO website content, in turn, should be under the coordination of the communication officer, and under the direct responsibility of each programme, support, operational and management units for the information they respectively are responsible for sharing.

Recommendation 19: In view of the need for additional human resources to manage the increasing number of ICTD activities in the country office and programmes, it is recommended that the CO recruits a national programme officer with relevant skills and experience for the management of the ICTD Coordination Unit. Resident with the CO, the main tasks of the programme officer will be to coordinate and/or manage ICTD activities (both stand-alone projects and mainstreamed component within other programmes), mobilise resources for the implementation of those and future activities, and prepare the organisational ground for the eventual creation of a full-blown ICTD Programme.

Funding 10: Alternatively, if funds are not available for a NPO, the CO could consider submitting a request to the UNITEs programme (<http://www.unites.org/>) for an international UNV, assuming someone with the required technical qualifications and programme skills could be promptly recruited

B. Programme Level

Recommendation 20: Recommend that current and new management staff of the Georgia programmes (and of the Governance programme in particular, for its key role in ICTD activities) acquire or have sufficient knowledge and skills in ICTD issues. This should include: understanding of information management issues related to development activities, notably participation and facilitation of peer networking, information dissemination through various media, and implementation of information needs assessments among public and civil society institutions; and understanding of information technologies and their use for information management in a transitional context.

LIST OF POSSIBLE FUNDING SOURCES AND PARTNERSHIPS

The following partial list includes the names and contacts of organisations and programmes that could be interested in funding ICTD activities in Georgia and the sub-region, or enter into partnership with UNDP for the execution of activities.

Donor	Details
Development Gateway	Research, local access, content development, content management tools
GIPI	ICT legal issues, regulations
Internews	Media issues, capacity building, organising, content development and sharing
IREX	Public Access Points, notably through its Internet Access and Training Programme (IATP) initiative.
Open Society Institute (Soros)	Public Access Points Contacts: Darius Cuplinskas, Director, OSI Information Programme, cuplinsk@osi.hu ; and Jerzy Celichowski, Deputy Director, OSI Information Programme, celichow@osi.hu .
TACIS	Technical Assistance to the Commonwealth of Independent States. Provides mostly management advises.
UNDP Thematic Trust Funds	ICT TTF Focus: National and regional e-strategies; strategy implementation and capacity development; ICTs and democratic governance; innovative bottom-up ICTs initiatives; awareness raising. Contact for ECIS: François Fortier, ICTD Policy Advisor, francois.fortier@undp.org Other TTFs should be carefully considered, as funding from the ICT TTF is to date very limited. Requests can be made from other TTFs when ICT components are relevant to the main themes of those practices.
UNIDO, UNECE	ICT investment promotion
UNITeS	Volunteers (both national and international) and funds for operation of their activities.
USAID	Has supported transparency and accountability of legislatures.