



SCIENCE & TECHNOLOGY
CENTER IN UKRAINE



2009 Annual Survey

Kiev

Key Conclusions

STCU conducted its fifth annual survey of Technical Units (TUs) with active STCU projects to evaluate the units' level of self-sustainability and the impact of STCU activities. The 2009 annual survey included as previous year four STCU Recipient Countries (without Uzbekistan). 236 Technical Units responded to the survey questionnaire, which is maximal number of respondents for now and is about 10% more than in 2008. The sample in Moldova increased three times (5-15TUs) in Azerbaijan on 65% (13-20 TUs). The sample size of all Recipient Parties, except Ukraine, is too small and renders impossible any general conclusion about country specifics.

- There was a slight improvement in the aggregate percentage of respondent TUs evaluated to be "sustainable" between the 2009 and previous annual surveys. The percentage share of "sustainable" TUs grew from 36% in the 2006 survey, 39% in 2007 survey, 40 % in 2008 to 44% in 2009. While the percentage share of "non-sustainable" fell from 59% in 2006, 57% in 2007, 53% in 2008 to 52% in 2009.
 - There is increasing in the percentage of sustainable TUs among the respondents from Azerbaijan (33%-30%-15% to 35% this year).
 - Georgian TUs increased their level of sustainability from 33% in 2007-2008, 37% in 2006 to 46% in 2009.
 - Slight but steady increasing in the level of sustainability during 2006-2009 is observed among Ukrainian TUs (39%-42%-42,3%-44%);
 - In Moldova 8 TUs (53%) were evaluated as sustainable (versus 1 (25%) in 2007, 3 (60%) in 2008).
- The quality of sustainability is equal to results of 2007 (7% of extra-sustainable units) and is less than last year (10%). 17 TUs in 2009 were evaluated as "extra sustainable". Of the Recipient Parties surveyed, Ukrainian respondents continue to show the largest percentage of extra-sustainable TUs 9% (16TUs).
- There was a shift toward government financing in the aggregate diversification of TU budgetary financing sources in 2009 in comparison with last year (52%-46%). It is explained by the increasing of the government share in the budget-2009 of Moldavian TUs (53% instead of 38.5% in 2008) and Azerbaijan (53% - 46%). But the sample of these two countries is not statistically reliable. Georgia steadily is the least dependent on the government financing (about 37%) and Ukraine – the most depended (~ 66% last three surveys, 58% in 2005-2006).
- The funding from STCU grants makes up 31%, which is minimal value through all the surveys. Funding from commercial sources is 7.5% (versus 13 % last year and 9% the year before), funding from other non-governmental sources increased - 9.5% versus 7% in 2008 and 3% in 2007.
 - Responses from Ukrainian TUs demonstrate clearly government oriented type of their financing. While STCU contribution stays minimal (24% this year and roughly in same range before), its share non-governmental financing is the biggest (70%).
 - Georgia is the only country this year, where non-governmental financing prevails. Through all the surveys government contribute only ~ 37% to the TU budget. In 2009 this share is equal to STCU contribution, which is the biggest value among four countries. So, for now, Georgian TUs are the most STCU-oriented. In 2009 Georgian TUs have the largest share from other domestic non-government organizations (12%).
 - The distribution of financing in Azerbaijan and Moldova changed in comparison with 2008, but is quite similar with 2006 and 2007 results, when about 53% of the budget has come from the government sources. The share of the funding from commercial sources in Moldovan TUs in 2009 decreased much, but, nevertheless it stays the third year the largest among the responding Recipient Party (25% - 21,5% - 11%).
- Quaintly of perspective technologies, accumulated by TUs, increases each year: 531-628-751 till 775 today.
- In 2009 international and publishing activities are much more numerous in Moldova but decreased in Azerbaijan. In Ukraine and Georgia these values vary depending on indexes. The share of STCU support is remaining generally the same - about 30% for Moldova and 20-25% for other countries.

- **Introduction**

In November-December 2009, STCU conducted its fifth annual survey of Technical Units (TUs) with active STCU projects to evaluate the units' level of self-sustainability and the impact of STCU activities. The term "technical unit" refers to entity within the institute of NASU – the most often it is whether department or laboratory. Very seldom such technical unit is a small firma.

In December 2009 STCU received 236 answers with data on TU performance during this year. The number of answers is about 10% than two previous surveys. The sample in Moldova increased three times (5-15TUs) in Azerbaijan on 65% (13-20 TUs). This is the second time that Uzbekistan was not included in the survey. The sample size of all Recipient Parties, except Ukraine, is too small and renders impossible any general conclusion about country specifics.

The STCU annual survey methodology (including the methodology for sustainability evaluation) was developed in 2005 by joint effort between STCU and National Academy of Sciences of Ukraine (NASU) through the Dobrov Center for Scientific and Technological Potential and Science History Studies (Ukraine). It includes three main and five additional criteria:

Evaluation of Technical Unit Self-Sustainability

Table 1. Description of Sustainability Evaluation Criteria

#	Criteria	Description
1	Presence of non-government financing	Reflects the level of intensity of relations between business and the unit. If these relations are stable, the unit could potentially commercialize its results and receive extra income
2	Share of budget devoted to applied research	Min 10% of TU budget; reflects more 'practical' orientation of the unit
3	Differentiation of sources of non-government financing	Presence of not less than two financing sources; reflects the possibility of the unit receiving money from different sources and allowing it to continue activities should one source disappear
4	Number of publications in referred foreign journals	At least two such publications per unit; reflects the unit's connection and credibility within external science communities
5	Presence of contract with a foreign partner	At least one; reflects unit's capability to attract contract research from outside sources and foreign customers.
6	Number of technologies that are commercialized	At least one of such technology; reflects the unit's potential to attract external, commercial technology financing
7	Presence of young researchers in the TU	Not less than 5%; reflects unit's recruiting ability and attractiveness to new researchers, as a measure of the unit's long-term viability
8	Relatively young average age of researchers	Not higher than 55 years; reflects the unit's ability to retain newly recruited researchers, as well as its future R&D capability and viability

The first three criteria (highlighted above) represent an assumed minimum threshold for self-sustainability. The additional criteria provide a measure of the depth/strength of the technical unit's sustainability.

- **Sustainable Technical Units:** Units whose responses fulfilled Criteria 1-3 and at least one of Criteria 4-6.
- **Extra Sustainable Technical Units:** Units whose responses fulfilled all eight sustainability criteria.
- **Non-Sustainable Technical Units:** Units whose responses failed to meet Criteria 1-3.

The table below summarizes the share of respondent TUs that were determined to fall into one of the sustainability levels. A comparison to the other survey evaluations is shown in the following graphics.

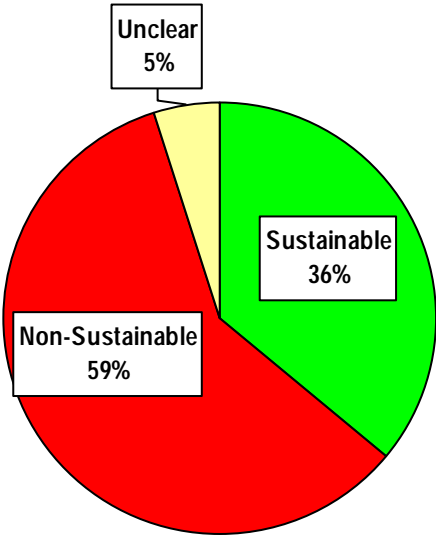
Table 1. Sustainability of Technical Units by Country and In Total, 2009

	Azeri TUs	Georgian	Moldovan	Ukrainian	Total
Sustainable Units	7 (35%)	11 (46%)	8 (53%)	77 (44%)	103 (44%)
<i>including Extra Sustainable Units</i>	1 (5%)	0	0	16 (9%)	17 (7%)
Non-sustainable Units	10 (50%)	13(54%)	7 (47%)	92 (52%)	122 (52%)
Units with unclear status (not enough data for ranking)	3 (15%)	0	0	8 (4%)	11(4%)
Total units	20	24	15	177	236

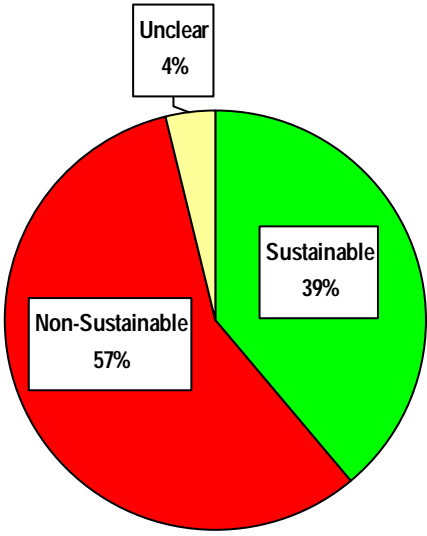
Table 2. Source of Budgetary Financing Reported by TUs by Country and In Average, 2009

Source of Financing	Azeri TUs	Georgian	Moldovan	Ukrainian	Average %
National Government	53%	37%	53%	66%	52%
Non-government	47%	63%	47%	34%	48%
• <i>Share from STCU Grants</i>	31%	37%	32%	24%	31%
• <i>Share from Private Commercial Entities</i>	7%	5%	11%	7%	7.5%
• <i>Share from Other Domestic Non-Government Organizations (except STCU)</i>	7%	12%	2%	2%	6%
• <i>Share from Other Foreign Non-Government Organizations (except STCU)</i>	2%	9%	2%	1%	3.5%

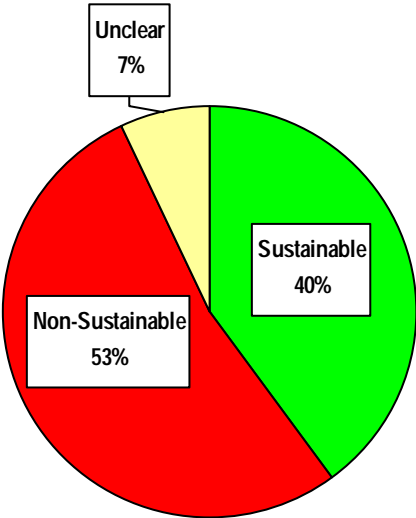
Technical Unit Sustainability Comparison



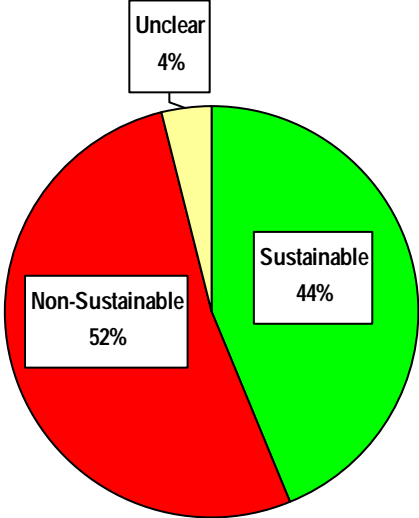
2006: 218 Responses



2007: 209 Responses

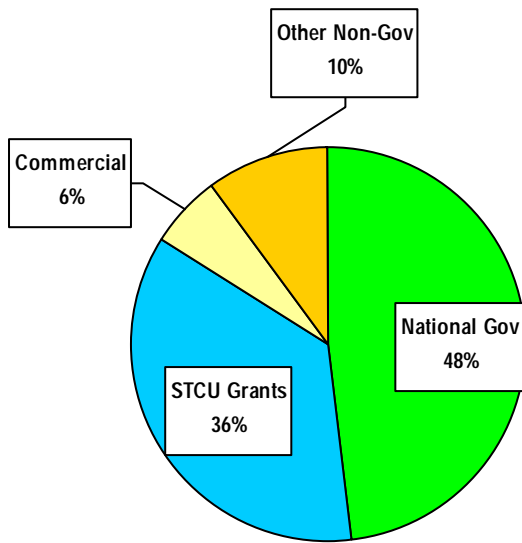


2008: 210 Responses

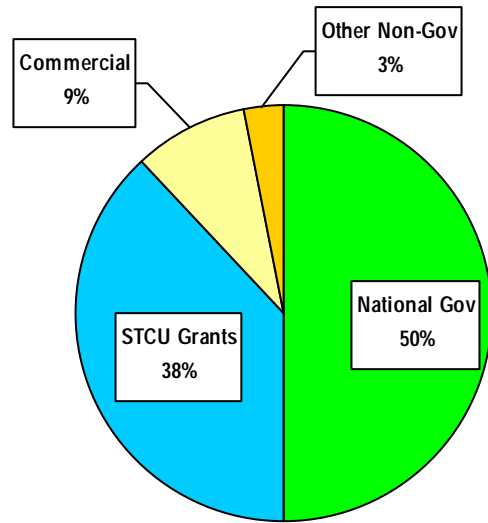


2009: 236 Responses

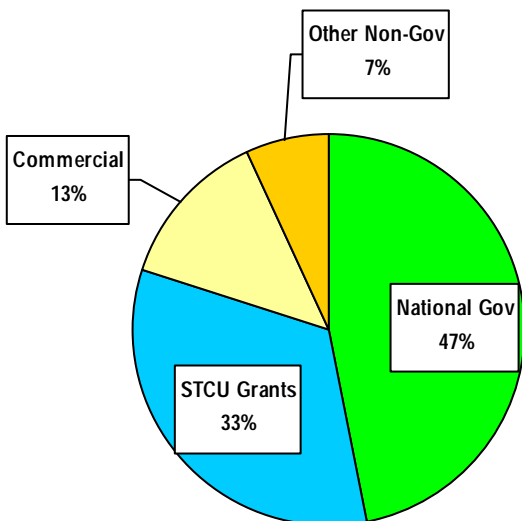
Technical Unit Sources of Income Comparison



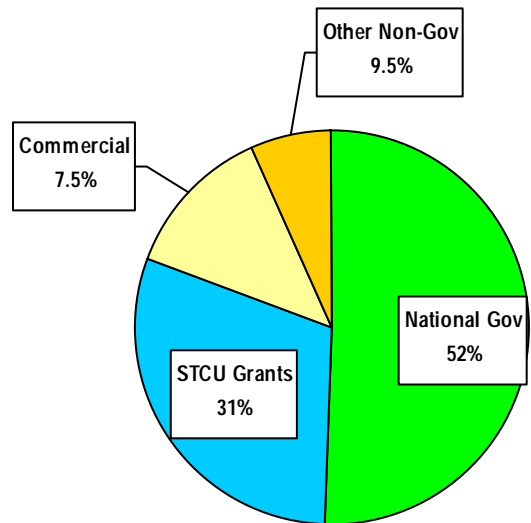
2006: 218 Responses



2007: 209 Responses



2008: 210 Responses



2009: 236 Responses



AZERBAIJAN

Key Findings from Azeri Technical Units:

1. It is the fourth time, that Azeri TUs participate in the TU survey. This year 20 questionnaires were received from Azeri Technical Units (TUs) with active STCU projects in 2009, which is twice bigger number than in 2006-2007 surveys (10 TUs in 2006, 9 in 2007, 13 in 2008). Nevertheless the number of TUs is insufficient for making statistic conclusions. Moreover in 2006 4 of the 9 respondents provided data about the entire institute, rather than about only the TUs with STCU projects, that makes difficult the comparison.
2. Of the Azeri respondents, 7 TUs (35% of the respondents) were evaluated as sustainable. One TU is evaluated as extra-sustainable. 10 TUs (50% of respondents) were evaluated as non-sustainable. This is an improvement from the sustainability levels evaluated in previous surveys. But an accurate comparison is difficult because of the reasons mentioned above.
3. Unlike previous year and similarly with 2006-2007 surveys, in 2009 the majority of the Azeri respondents' financing (53%) came from governmental sources. This change in comparison with 2008 is caused by decreasing of the share, coming from private commercial entities in TUs' budget. STCU share is equal to 31% of TU budget and 66% of all non-governmental funding.
4. All the characteristics of patenting and publishing activity, international collaboration have a decrease if to recalculate it as activity per one TU. While quantity of responding TUs is 20 instead of 13 the values are just a bit more or are even less in cases of 1) quantity of national patents obtained (14-9), 2) perspective technologies (63-37), 3) articles (395-178) and 4) participation in international conferences (100-93).
5. The influence of STCU, which does not depend on sample, varies depending on index and is in average 25% for international collaboration and 20% for publishing activity.

Background

In November 2009 STCU has got answers about performance during the year from 20 Azeri TUs, which fulfill 23 STCU projects. The number of TUs is bigger than in previous surveys (9 in 2006, 10 in 2007, 13 in 2008), but stays nevertheless insufficient for making statistic conclusions. Correct comparison of Azeri responses from the four annual surveys is difficult also because in 2006, four of the responding TUs gave information about their whole institutes, rather than just on the TU itself.

Technical Units Sustainability Evaluation

Using the sustainability criteria described earlier, the responding Azeri TUs were categorized accordingly, using the data drawn from the TU responses to the questionnaire. Of the Azeri respondents, 7 TUs (35 % of the respondents) were evaluated as sustainable. One TU is evaluated as extra-sustainable. 50% (10TUs) as not-sustainable. It differs from previous year results and here we see the improvement from the sustainability level. But the small number of responding TUs makes it difficult to draw general conclusions about Azeri TU sustainability.

Sustainability of Responding Azeri TUs (2009)

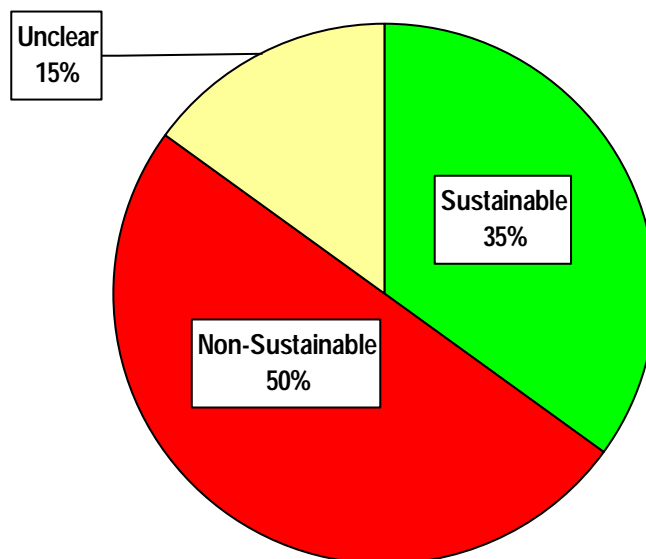


Table AZ-1. Sustainability Evaluation of Azeri Technical Units

	2006	2007	2008	2009
Sustainable Units	3 (33%)	3 (30%)	2 (15%)	7 (35%)
<i>including Extra Sustainable Units</i>	1 (11%)	0	1 (9%)	1 (5%)
Non-sustainable Units	6 (67%)	7 (70%)	11 (85%)	10 (50%)
Units with unclear status (not enough data)	0	0	0	3 (15%)

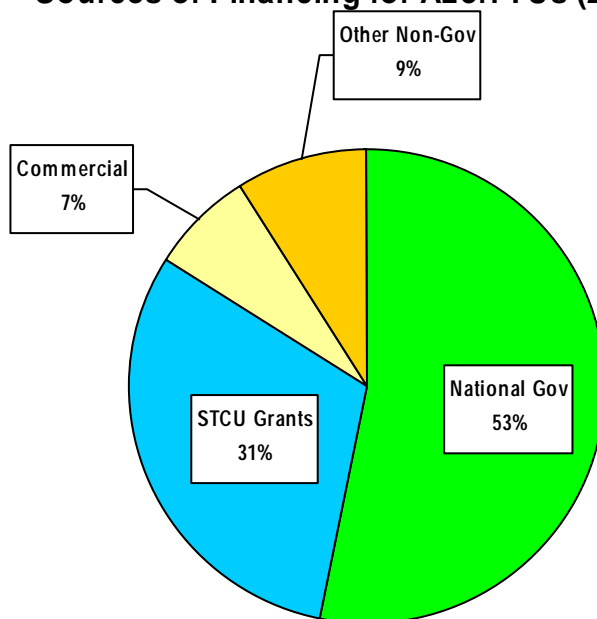
Financing Sources

Unlike previous year and similarly with 2006-2007 this year the majority of the Azeri respondents' financing (53%) came from non-governmental sources. STCU grants dominate in share of budgetary financing, holding a 31% portion of the respondents' funding and being the main part (66%) of all non-government financing.

Table AZ-2. Source of Budgetary Financing for Technical Units

Source of Financing (% of TU Budget)	2006	2007	2008	2009
National Government	58%	53%	46%	53%
Non-Government	42%	47%	54%	47%
• <i>Share from STCU Grants</i>	21%	40%	37%	31%
• <i>Share from Private Commercial Entities</i>	11%	2%	16%	7%
• <i>Share from Other Domestic Non-Government Organizations (not- STCU)</i>	8%	0%	0%	7%
• <i>Share from Foreign Non-Government Organizations (except STCU)</i>	2%	5%	1%	2%

Sources of Financing for Azeri TUs (2009)



Characteristics of Technical Units

Table AZ-3. Quantity of STCU Projects

	Total		
	2006	2007	2008
# of Responding TUs with 1Project	6 (67% of total)	8 (80% of total)	18 (90% of total)
# of Responding TUs with 2 Projects	3 (33% of total)	2 (20% of total)	1 (5% of total)
# of Responding TUs with 3 Projects	-	-	1 (5% of total)
# of Responding TUs with 4 Projects	-	-	-
# of Responding TUs with 5 Projects	-	-	-

Areas of Research Focus

The main research areas reported by the Azeri respondents were physics (radiation physics, hetero-structures, diffusion phenomena, physics of biological systems) chemistry, biology (zoology, ecology, botany), GIS, mechanics etc.

Collaboration with Foreign Countries

In 2009 the responding Azeri TUs reported scientific contacts mostly with the USA, Canada, France and Germany. Other country-partners are Ukraine, UK, Georgia, Turkey, Hungary, Portugal and some other.

Profile of Technical Unit Scientists

Table AZ-4. Average Age of Scientists in Responding Azeri TUs

	Average Age (years) 2006	Average Age (years) 2007	Average Age (years) 2008	2009
All Researchers	44	45	44	44
Doctors of Science	53	62	52	60
Candidate of Science (PhD equivalent)	50	48	50	44

Table AZ-5. Proportion of Scientists in Responding Azeri TUs, by Age

	% of TU Staff 2006	% of TU Staff 2007	% of TU Staff 2008	2009
Under 35 years old	12%	25%	22%	20%
Retired	26%	35%	31%	23%

STCU Impact on Promoting S&T Excellence

Technology Promotion & Patenting

In a difference with previous years in 2009 much less promising technologies(37) are reported comparing to 63 in 2008 (but 12 technologies in 2007, 35 in 2006). 11 Azeri TUs have 1 till 12 technologies ready for market. 81% technologies were reported as patented and 19% as having business plan, 27% - being implemented. Fewer national patents (9 of them) were obtained in 2009. None of the reported technologies had STCU technology promotion assistance.

Table AZ-6. Technologies Reported by Responding TUs

* Total percentage exceeds 100% because respondents could choose multiple categories in the question

	Total and % of Total			
	2006	2007	2008	2009
Technologies, total	35	12	63	37
- implemented in market	2 (5.7%)	1 (8%)	10 (16%)	10 (27%)
- number of patents	29 (83%)	5 (42%)	49 (78%)	30 (81%)
- supported by a business plan	4 (11%)	0	7 (11%)	7 (19%)
- supported by marketing research	2 (5.7%)	0	1 (2%)	11 (30%)
- applied for STCU technology promotion assistance (e.g., patent support, etc.)	0	0	1 (2%)	0

Table AZ-7. Patenting Reported by Responding TUs

	2006		2007		2008		2009	
	Total	With STCU	Total	With STCU	Total	With STCU	Total	With STCU
National Patent Applications	5	0	4	0	14	0	9	0
Foreign or International Patents	0	0	0	0	0	0	0	0

Level of International Collaboration & Scientific Activity

Comparing data showing international collaboration and publishing activity with previous years we see, that we have significant decrease. Even if most indexes have a bit bigger value, but they refer to 20 TUs and not about 10-13 as before. It means the activity per TU is less. Number of articles within the country and abroad (395-178) and participation in international conferences (100-93) decreased the most. The influence of STCU, which does not depend on sample, varies depending on index and is in average 25% for international collaboration and 20% for publishing activity.

Table AZ-8. International Collaborative Activities

	2006		2007		2008		2009	
	Total	With STCU assistance (% of Total)	Total	With STCU assistance (% of Total)	Total	With STCU assistance (% of Total)	Total	With STCU assistance (% of Total)
Participation in International Conferences	161	13 (8%)	65	24 (37%)	100	13 (13%)	93	15 (16%)
• within the country	76	7 (9%)	33	13 (39%)	56	5 (9%)	51	3 (6%)
• Abroad	85	6 (7%)	32	11 (34%)	44	8 (18%)	42	12 (29%)
Joint Publications	137	5 (3%)	34	12 (35%)	23	10 (43%)	35	8 (23%)
Joint Scientific Projects	30	10 (33%)	14	6 (42%)	23	9 (39%)	32	18 (56%)
Contracts with Business Partners	20	3 (15%)	11	2 (18%)	13	0	15	2 (13%)
• within the country	16	1 (6%)	5	1 (20%)	10	0	12	1 (8%)
• From Abroad	4	2 (50%)	6	1 (17%)	3	0	3	1 (33%)
Training abroad	0	0	6	2 (33%)	4	0	8	3 (38%)

Table AZ-9. Scientific Publications

	2006		2007		2008		2009	
	Total	With STCU Assistance	Total	With STCU Assistance	Total	With STCU Assistance	Total	With STCU Assistance
Monographs	11	0	6	0	15	0	16	0
• within the country	9	0	6	0	15	0	15	0
• Abroad	2	0	0	0	0	0	1	0
Articles	233	10 (3%)	119	30 (25%)	395	76 (19%)	178	22 (12%)
• within the country	184	6 (3%)	89	17 (19%)	220	39 (18%)	101	11 (11%)
• Abroad	49	4 (8%)	30	13 (43%)	175	37 (21%)	77	11 (14%)
Abstracts of the conferences	126	24 (16%)	101	31 (31%)	115	46 (40%)	168	44 (26%)
• within the country	58	7 (12%)	57	16 (28%)	57	24 (42%)	77	15 (19%)
• Abroad	68	17 (25%)	44	15 (34%)	58	22 (38%)	91	29 (32%)

Summary of Responding Azeri Technical Units (2006 - 2009)

Total (or % of Total)	2006	2007	2008	2009
TUs which responded to questionnaires	9	10	13	20
Source of Financing (% of TU Budget)				
National Government	58%	53%	46%	53%
Non-government	42%	47%	54%	47%
- STCU Share of Total (Government + Non-government Financing)	21%	40%	37%	31%
- STCU Share of Non-government Funding Portion	50%	85%	69%	66%
Technical Unit Sustainability Evaluation				
Sustainable Units	3 (33%)	3 (30%)	2 (15%)	7 (35%)
<i>including Extra Sustainable Units</i>	1 (11%)	0	1 (9%)	1 (5%)
Non-sustainable Units	6 (67%)	7 (70%)	11 (85%)	10 (50%)
Units with unclear status (not enough data for ranking)	0	0	0	3 (15%)
Areas of STCU Project and Supplemental Activities	# of TU activities with STCU Support (% of Total)			
Technologies that are Market-Ready	33	12	63	37
International Collaboration Connected with STCU				
Participation in International Conferences within Country	7 (9%)	13 (39%)	5 (9%)	3 (6%)
" " " Conducted Abroad	6 (7%)	11 (34%)	8 (18%)	12 (29%)
Joint Scientific Articles with Foreign Colleagues	5 (3%)	12 (35%)	10 (43%)	8 (23%)
Participation in Joint Research Projects (with foreign partners)	10 (33%)	6 (42%)	9 (39%)	18 (56%)
Contracts with Private Companies within the Country	1 (6%)	1 (20%)	0	1 (8%)
" " " From Abroad	2 (50%)	1 (17%)	0	1 (33%)
Participation in Training Programs Abroad	0	2 (33%)	0	3 (38%)
Scientific Publishing Activity Connected with STCU				
Scientific Articles within the Country	6(3%)	17 (19%)	39 (18%)	11 (11%)
" " Abroad	4(8%)	13 (43%)	37 (21%)	11 (14%)
Abstracts Submitted to Conferences within the Country	7(12%)	16 (28%)	24 (42%)	15 (19%)
" " " Abroad	17(25%)	15 (34%)	22 (38%)	29 (32%)
Patenting Activity Connected with STCU projects				
National Patent Applications	0	0	0	0
Foreign/International Patent Applications	0	0	0	0



GEORGIA

Key Findings from Responding Georgian Technical Units:

1. This is the fourth time, that Georgian TUs participate in the survey. This year the questionnaires were received from 24 Georgian TUs with active STCU projects in 2009. It is the same number as last year and bigger number than previous surveys (18-19 TUs). As Georgia also receives similar project funding and supplemental support from ISTC, this may influence any general evaluation of Georgia based from these STCU-focused results.
2. Of the Georgian respondents, 11 TUs (46% of the respondents) were evaluated as sustainable, 13 TUs (54% of respondents) were evaluated as non-sustainable. Here we see the improvement to the sustainability level of the years 2006-2007. None of TUs was evaluated to be extra sustainable.
3. Georgia is the only country in 2009, where non-government financing forms the biggest share - 63% of the responding Georgian TU budgetary financing (61-66% other surveys). In 2009 STCU project grant funding forms significant part of the Georgian TU financing (37%) and is equal to the portion of TU financing coming from the national government. It is maximal STCU share through four countries surveyed in 2009. Increased share from other domestic non-government organizations (till 12%) makes the biggest difference in distribution of the income of TUs in 2009 in comparison with other surveys.
4. In 2009, Georgian scientists reported less participation in international conferences and much less joint publications, but more contracts with business partners, joint scientific projects and trainings abroad. The share receiving STCU support remaining generally the same as in 2006-2007 - about 25% for international collaboration and 20% for publishing activity.

Background

Questionnaires were received from 24 Georgian TUs with active STCU projects in 2009, which is the same number as last year and bigger number than in previous survey (18-19 TUs before). As Georgia is the only Recipient Party that is also a member of STCU's sister center, the International Science and Technology Center (ISTC), it is possible that the results of these STCU-focused survey results underestimates the overall impact of "science center" activity in Georgia.

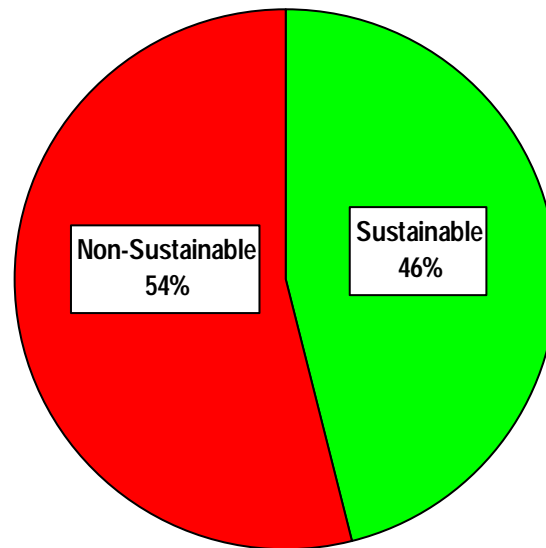
Technical Units Sustainability Evaluation

Using the sustainability criteria described earlier, the responding Georgian TUs were categorized accordingly, using the data drawn from the TU responses to the questionnaire. The percentage share of sustainable TUs (46%) increased in 2009 (3 TUs more) and non-sustainable TUs (54%) decreased in comparison with previous years. None of the responding Georgian TUs was evaluated as extra-sustainable.

Table GE-1. Sustainability Evaluation of Georgian Technical Units

	Total (% of Total)			
	2006	2007	2008	2009
Sustainable Units	7 (37%)	6 (33%)	8 (33%)	11 (46%)
<i>including Extra Sustainable Units</i>	1 (5%)	0	2 (8%)	0
Non-sustainable Units	11 (57%)	12 (67%)	16(67%)	13(54%)
Units with unclear status (not enough data for ranking)	1 (5%)	0	0	0
Total TUs	19	18	24	24

Sustainability of Responding Georgian TUs (2009)



Financing Sources

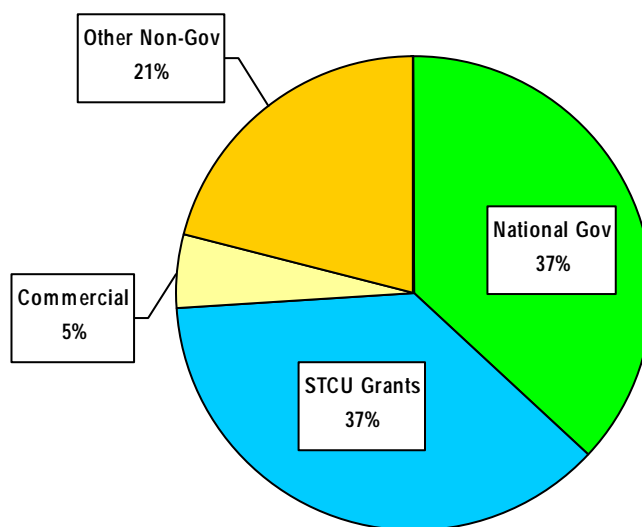
Through all the surveys conducted in Georgia the distribution of governmental and non-governmental financing stays similar. Georgia is the only country in 2009, where non-government financing forms the biggest share (63%) of the responding Georgian TU budgetary financing.

In 2009 STCU project grant funding forms significant part of the Georgian TU budget (37%) and is equal to the portion of TU financing coming from the national government. It is maximal STCU share through four countries surveyed in 2009. This number is similar with 2008, but is less than in 2006-2007. Increased share from other domestic non-government organizations (till 12%) forms the biggest difference in distribution of the income of TUs in 2009 in comparison with other surveys.

Table GE-2. Source of Budgetary Financing for Technical Units

Source of Financing (% of TU Budget)	2006	2007	2008	2009
National Government	39%	34%	36%	37%
Non-government	61%	66%	64%	63%
• Share from STCU grants	47%	52%	39%	37%
• Share from Private Commercial Entities	0%	3%	10%	5%
• Share from Other Domestic Non-Government Organizations	2%	1%	2%	12%
• Share from Foreign Non-Government Organizations (except STCU)	12%	0%	13%	9%

Sources of Financing for Georgian TUs (2009)



Characteristics of Technical Units

Table GE-3. Quantity of STCU Projects

	2006	2007	2008	2009
# of Responding TUs with 1 Project	16 (85% of total)	16 (88% of total)	21 (88% of total)	19 (79 % of total)
# of Responding TUs with 2 Projects	1 (5% of total)	2 (22% of total)	2 (8% of total)	4 (17 % of total)
# of Responding TUs with 3 Projects	1 (5% of total)	-	1 (4% of total)	1 (4% of total)
# of Responding TUs with 4 Projects	-	-	-	-
# of Responding TUs with 5 Projects	1 (5% of total)	-	-	-

Areas of Research Focus

The main research areas reported by the Georgian respondents were same as last year: biochemistry/biotechnology, physics, material science genetics, medicine/pharmacology and chemistry.

Collaboration with Foreign Countries

The Georgian TUs reported in 2009 scientific contacts mostly with the USA. This country is mentioned as a partner by 18 TUs from 24. Germany and Canada are mentioned in 8 responses. Other partners are Russia (6 TUs), Ukraine, Greece and also GB, France etc.

Profile of Technical Unit Scientists

Table GE-4. Average Age of Scientists in Responding Georgian TUs

	Average Age (years)			
	2006	2007	2008	2009
All Researchers	48	48	44	52
Doctors of Science	60	58	55	56
Candidate of Science (PhD)	49	45	41	44

Table GE-5. Proportions of Scientists in Responding Georgian TUs, by Age

	% of TU Staff			
	2006	2007	2008	2009
Under 35 years old	36%	16%	16%	10%
Retired	35%	20%	14%	10%

STCU Impact on Promoting S&T Excellence

Technology Promotion & Patenting

The respondent Georgian TUs reported 59 market-ready technologies and 63% of these technologies are patented. Four of the technologies have obtained national patents in 2009, one was obtained with STCU assistance. More technologies than reported before are implemented in the market.

Table GE-6. Technologies Reported by Responding TUs

	Total and % of Total			
	2006	2007	2008	2009
Technologies, total	35	39	75	59
- implemented in market	9 (26%)	0	5 (7%)	10 (17%)
- number of patents	24 (68%)	39 (100%)	33 (44%)	37 (63%)
- supported by a business plan	2 (5.7%)	5 (13%)	15 (20%)	12(20%)
- supported by marketing research	-	5 (13%)	14 (19%)	6 (10%)
- applied for STCU technology promotion assistance (e.g., patent support, etc.)	2 (5.7%)	1 (3%)	-	-

* Total percentage exceeds 100% because respondents could choose multiple categories in the question

Table GE-7. Patenting Reported by Responding TUs

	2006		2007		2008		2009	
	Total	With STCU	Total	With STCU	Total	With STCU	Total	With STCU
National Patent Applications	11	8 (72%)	7	2 (29%)	4	2 (50%)	4	1 (25%)
Foreign or International Patents	-	-	1	-	-	-	-	-

Level of International Collaboration & Scientific Activity

Participation in international conferences remained the most popular collaborative activity among the respondent Georgian TUs, but its quantity became less (89). The quantity of joint publications is minimal this year (51). But the quantity of contracts with business partners and joint scientific projects and trainings abroad increased. 17 monographs were issued this year, which is the maximal index.

The share receiving STCU support remaining generally the same as in 2006-2007 - about 25% for international collaboration and 20% for publishing activity.

Table GE-8. International Collaborative Activities

	2006		2007		2008		2009	
	Total	With STCU assistance (% of Total)	Total	With STCU assistance (% of Total)	Total	With STCU assistance (% of Total)	Total	With STCU assistance (% of Total)
Participation in International Conferences	72	20 (28%)	115	27 (23%)	147	33 (22%)	89	21 (24%)
within the country	15	3 (20%)	29	11 (38%)	50	4 (8%)	23	5(22%)
Abroad	57	17 (30%)	86	16 (19%)	97	29 (30%)	66	16(24%)
Joint Publications	110	23 (21%)	61	15 (25%)	75	27 (36%)	51	13(25%)
Joint Scientific Projects	28	5 (18%)	31	16 (52%)	40	18 (45%)	54	16(29%)
Contracts with Business Partners	6	2 (33%)	19	3 (11%)	4	1 (25%)	20	2(10%)
within the country	2	-	14	2 (14%)	1	0	6	0
From Abroad	4	2 (50%)	4	1 (25%)	3	1 (33%)	14	2(14%)
Training abroad	16	3 (19%)	10	1 (10%)	20	2 (10%)	32	2(6%)

Table GE-9. Scientific Publications

	2006		2007		2008		2009	
	Total	With STCU Assistance	Total	With STCU Assistance	Total	With STCU Assistance	Total	With STCU Assistance
Monographs	6	0	2	0	8	0	17	0
within the country	4	0	2	0	8	0	13	0
Abroad	2	0	0	0	-	0	4	0
Articles	149	35 (23%)	282	36 (13%)	360	39 (11%)	324	29 (9%)
within the country	63	19 (30%)	159	19 (12%)	234	23 (10%)	174	17 (10%)
Abroad	86	16 (19%)	123	17 (14%)	126	16 (13%)	150	12 (8%)
Abstracts of the conferences	57	13 (26%)	135	18 (12%)	133	38 (29%)	118	26 (22%)
within the country	12	3 (25%)	37	6 (16%)	52	4 (7%)	40	8 (20%)
Abroad	45	10 (22%)	98	12 (12%)	81	34 (42%)	78	18 (23%)



MOLDOVA

Key Findings from Moldavian Technical Units:

1. Questionnaires were received from 15 Moldavian Technical Units with active STCU projects in 2009. This year the sample is three times bigger than before, but it stays still too small for drawing general conclusions about the overall state of Moldovan TUs or STCU's impact on their activities. Moldova was included in the STCU annual survey that other countries and this was the third time that Moldovan TUs participated.
2. Of the Moldavian respondents, eight (53%) were evaluated as sustainable and seven (47%) were evaluated to be non-sustainable. It is the only country in 2009, where the quantity of sustainable TUs prevails.
3. Unlike previous year, in 2009 the governmental financing represented 53% of the responding TUs budgetary funding. STCU grants form bigger part of it - 32% of TUs' budgets, which is quite big share in all non-governmental financing (68%).
4. International and publishing activities are much more numerous even regarding three times more respondents. STCU impact on these activities is maximal in comparison with other countries and is about 30%.

Background

Questionnaires were received from 15 Moldavian Technical Units with active STCU projects in 2009. This was the third time that Moldovan TUs participated in the STCU annual survey. This year the sample is three times bigger than before, but it stays still too small for drawing general conclusions about the overall state of Moldovan TUs or STCU's impact on their activities.

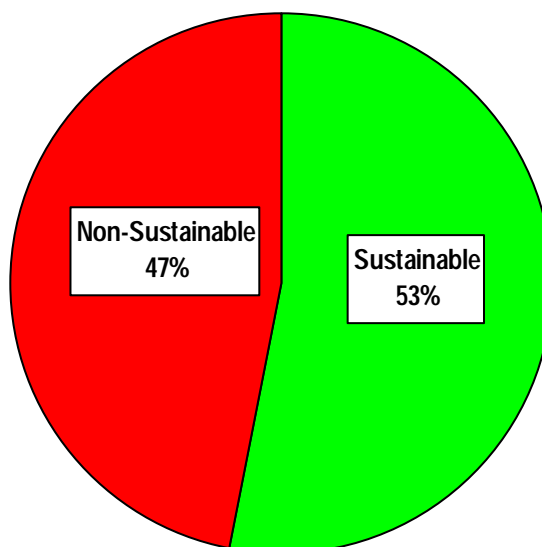
Technical Units Sustainability Evaluation

Using the sustainability criteria described earlier, the responding Moldavian TUs were categorized accordingly, using the data drawn from the TU responses to the questionnaire. 8 Moldovan TU (53% of the respondents) were evaluated as sustainable and none was evaluated to be extra sustainable. However, the small size of the sample (15 responding TUs) makes it difficult to draw general conclusions about the state of self-sustainability of Moldovan technical units.

Table MD-1. Sustainability Evaluation of Respondent Moldavian TUs (2009)

	2007	2008	2009
Sustainable Units	1 (25%)	3 (60%)	8 (53%)
<i>including Extra Sustainable Units</i>	0	0	0
Non-sustainable Units	3 (75%)	2 (40%)	7 (47%)
Units with unclear status (not enough data for ranking)	0	0	0
Total units	4	5	15

Sustainability of Responding Moldovan TUs (2008)



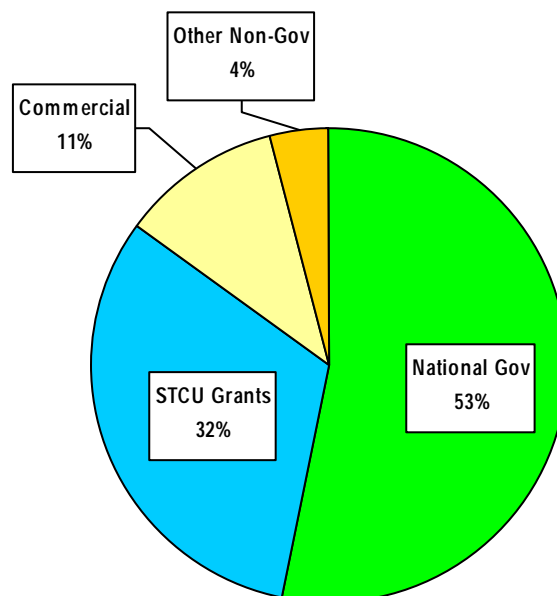
Financing Sources

Of the responding Moldavian TUs, unlike in 2008 and similarly with 2007, this year governmental financing formed the largest portion of their budgetary funding, amounting to about 53% of the TU budget. Such differences in data can be explained by the small size of the sample. Among the sources of non-governmental funding, STCU grants made up made up 32% of the total budget for the respondent Moldovan TUs (same as in 2008) and 68% of all non-governmental financing. Share of funding from other sources decreased, especially from commercial sources and other domestic not-government organizations. The share of the funding from commercial sources in Moldovan TUs decreased much in 2009, but, nevertheless it stays the third year the largest among the responding Recipient Party (25% - 21,5% - 11%).

Table MD-2. Source of Budgetary Financing Reported by Moldovan TUs

Source of Financing	2007	2008	2009
National Government	54%	38,5%	53%
Non-government	46%	61,5%	47%
• Share from STCU grants	22%	33%	32%
• Share from Private Commercial Entities	24%	21,5%	11%
• Share from Other Domestic Non-Government Organizations (except STCU)	0%	4%	2%
• %Share from Foreign Non-Government Organizations (except STCU)	0%	3%	2%

Sources of Financing of Moldavian TUs (2009)



Characteristic of Technical Units

Table MD-3. Quantity of STCU Projects Reported by Moldovan TUs (2009)

	2007	2008	2009
# of Responding TUs with 1 Project	4 (100% of total)	5 (100% of total)	15 (100% of total)
# of Responding TUs with 2 Projects	-	-	-
# of Responding TUs with 3 Projects	-	-	-
# of Responding TUs with 4 Projects	-	-	-

Areas of Research Focus

The main directions of research reported by the respondents were applied physics, medicine, electronics, nanotechnology, programming, biotechnology and electronics.

Collaboration with Foreign Countries

Unlike other countries the most frequent partner of Moldavian TUs is Germany (11TUs/73%). Other main partners of the responding Moldavian TUs were Romania and USA (8TUs) then Russia (7TUs), Ukraine (6TUs), France (5TUs). Several TUs mentioned UK, Austria, Check Republic, etc.

Profile of Technical Unit Scientists

Table MD-4. Average Age of Scientists in Responding Moldovan TUs (2009)

	2007 Average Age (years)	2008 Average Age (years)	2009 Average Age (years)
All Researchers	46	44	48
Doctors of Science	59	45	60
Candidate of Science (PhD)	49	30	47

Table MD-5. Proportions of Scientists in Responding Moldovan TUs, by Age (2009)

	2007 % of TU Staff	2008 % of TU Staff	2009 % of TU
Under 35 years old	19%	32%	23%
Retired	8%	14%	24%

STCU Impact on Promoting S&T Excellence

Technology Promotion & Patenting

There are 24 technologies reported by the respondent Moldovan TUs as worth promoting to the market, and half of these technologies are patented, only one is implemented. Moldavian TU reported about receiving 4 national and 1 international patent (the last one with assistance from STCU).

Table MD-6. Technologies Reported by Responding Moldovan TUs (2009)

	2007 Total (and % of Total)	2008 Total (and % of Total)	2009 Total (and % of Total)
Technologies	13	9	24
- implemented in the market	4 (31%)	2 (22%)	1 (4%)
- patented	10 (77%)	6 (67%)	12 (50%)
- supported by a business plan	1 (8%)	1 (11%)	4 (17%)
- supported by marketing research	3 (23%)	2 (22%)	7 (29%)
- applied to STCU technology promotion assistance (e.g., patent support, etc.)	0	0	0

* Total percentages exceeds 100% because respondents could choose multiple categories in the question

Table MD-7. Patenting Reported by Responding Moldovan TUs (2009)

	2007		2008		2009	
	Total	With STCU assistance	Total	With STCU assistance	Total	With STCU assistance
National (Moldovan) Patent Applications	4	0	4	3(75%)	4	0
Foreign or International Patents Applications	0	0	0	0	1	1 (100%)

Level of International Collaboration & Scientific Activity

This year STCU impact on participation of Moldavian scientists in the international conferences in Moldova and abroad is much more significant than before. International and publishing activities are much more numerous even regarding three times more respondents. And STCU share also increased this year. STCU impact on publication activity is about 25% and on international collaborations about 30%.

Table MD-8. International Collaborative Activities Reported by Moldovan TUs (2009)

	2007		2008		2009	
	Total	With STCU assistance	Total	With STCU assistance	Total	With STCU assistance
Participation in the International Conferences	36	2 (6%)	21	4 (19%)	83	19 (23%)
• within the country	26	1 (4%)	12	2 (17%)	39	7 (17%)
• Abroad	10	1 (10%)	9	2 (22%)	44	12 (28%)
Joint Scientific Articles with Foreign Colleagues	14	5 (36%)	16	3 (18%)	69	24 (35%)
Participation in Joint Research Projects (with foreign partners)	5	4 (80%)	5	3 (60%)	22	9 (40%)
Contracts with Business Partners	2	0	0	0	1	0
• within the country	2	0	0	0	1	0
• From Abroad	0	0	0	0	0	0
Training Abroad	4	0	3	0	13	6 (46%)

Table MD-9. Scientific Publications Reported by Moldovan TUs (2009)

	2007		2008		2009	
	Total	With STCU assistance	Total	With STCU assistance	Total	With STCU assistance
Monographs	1	0	0	0	3	0
• within the country	1	0	0	0	0	0
• Abroad	0	0	0	0	3	0
Articles	52	5 (10%)	38	7 (19%)	120	33 (27%)
• within the country	25	1 (4%)	21	4 (19%)	51	14 (27%)
• Abroad	27	4 (15%)	17	3 (18%)	69	19 (28%)
Abstracts Submitted to Conferences	56	2 (4%)	17	4 (24%)	93	24 (26%)
• within the country	37	1 (3%)	8	2 (25%)	43	7 (17%)
• Abroad	19	1 (5%)	9	2 (20%)	50	17 (34%)

Summary of Responding Moldavian Technical Units (2009)

	2007 Total (or % of Total)	2008 Total (or % of Total)	2009 Total (or % of Total)
TUs which responded to questionnaires	4	5	15
Source of Financing (% of TU budget)			
National Government	54%	38,5%	53%
Non-government	46%	61,5%	47%
- STCU Share of Total Budget (Government + Non-government Financing)	22%	33%	32%
- STCU Share of Non-government Funding Portion	48%	54%	68%
Technical Unit Sustainability Evaluation			
Sustainable Units	1 (25%)	3 (60%)	8 (53%)
<i>including Extra Sustainable Units</i>	0	0	0
Non-sustainable Units	3 (75%)	2 (40%)	7 (47%)
Units with unclear status (not enough data for ranking)	0	0	0
Areas of STCU Project and Supplemental Activities	# of TU activities with STCU Support (% of Total)		
Technologies that are Market-Ready	13	9	24
International Collaboration Supported by STCU			
Participation in International Conferences within Country	1(4%)	2 (17%)	7 (17%)
" " " Conducted Abroad	1(10%)	2 (22%)	12 (28%)
Joint Scientific Articles with Foreign Colleagues	5(36%)	3 (18%)	24 (35%)
Participation in Joint Research Projects (with foreign partners)	5(18%)	3 (60%)	9 (40%)
Contracts with Private Companies within the Country	0	0	0
" " " From Abroad	0	0	0
Participation in Training Programs Abroad	0	0	6 (46%)
Scientific Publishing Activity Supported by STCU			
Scientific Articles within the Country	1 (4%)	4 (19%)	14 (27%)
" " Abroad	4 (27%)	3 (18%)	19 (28%)
Abstracts Submitted to Conferences within the Country	1 (3%)	2 (25%)	7 (17%)
" " " Abroad	1 (5%)	2 (20%)	17 (34%)
Patenting Activity Supported by STCU			
National Patents	0	3 (75%)	0
Foreign/International Patents	0	0	1 (100%)



UKRAINE

Key Findings from Ukrainian Technical Units:

1. Ukrainian TUs participated for the fifth time in the survey. In 2009 177 Ukrainian TUs provided data about their performance during the year and the role of STCU in it. This number compares with previous surveys: 168 last year, 161 – in the 2007 survey, 160 in 2006 and 186 responses (but often not-complete) in 2005. Ukraine is the only country which has the sample, which is big enough and which was surveyed since 2005.
2. There is a slight increase of TU sustainability level through the surveys. Of the Ukrainian respondents, 77 TUs (about 44% of total respondents) were evaluated as being sustainable and 92 TUs (about 50% of the total) were evaluated to be non-sustainable. The percentage is not statistically different from 2007 and 2008 year results. 16 TUs (9%) were evaluated as extra-sustainable, which is also similar with 2007-2008.
3. Government financing holds the largest share of Ukrainian TU funding (66% of total), which stays the biggest percentage of all the Recipient Parties surveyed.
4. STCU grant funding continues to be the largest portion of non-governmental funding received by the respondent TUs (70%). It is the biggest share among 4 countries, but it represents only one fifth of the total budgetary financing of the respondent Ukrainian TUs. It stays still the smallest share of STCU funding in total TU budget among all the respondents from the Recipient Parties.
5. Responding Ukrainian TUs reported 655 technologies ready for market, which represents the biggest number for the moment. About 40 % of technologies are already applied in the marketplace and 61% are patented. But only about 10% of them are incorporated into business plans and supported by marketing research. These numbers are not statistically different from those in the 2006-2008 survey. Half of the international patents (4 of them) were obtained with STCU assistance.
6. Through 2005-2009 the quantity of participation in international scientific conferences, articles, published in Ukraine and abroad growth constantly and is maximal this year. Generally, STCU involvement has stayed approximately the same - approximately 25 % of all reported activities.

Background

In November 2009 177 Ukrainian TUs provided data about their performance during the year and the role of STCU in it. This number compares with previous surveys: 186 responses in 2005, 160 in 2006, 161 – in the 2007 survey, 168 in 2008. Ukraine is the only country which has the sample, which is big enough and which was surveyed during four years.

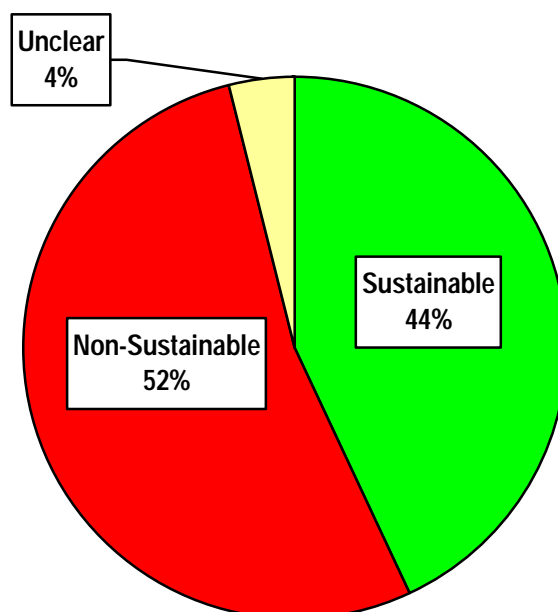
Technical Units Sustainability Evaluation

Using the criteria described in the beginning of the report 77 TUs (about 44% of total respondents) were evaluated as being sustainable and 92 TUs (about 50% of the total) were evaluated to be non-sustainable. The percentage is similar with 2007 and 2008 year results. 16 TUs were evaluated as extra-sustainable, which is also similar with 2007-2008. In the inaugural 2005 STCU survey, many TUs provided insufficient data for a sustainability evaluation. Therefore, comparisons between the 2005 evaluations and subsequent survey results are affected by these differences.

Table UA-1. Sustainability Evaluation of Ukrainian Technical Units

	Total (% of Total)				
	2005	2006	2007	2008	2009
Sustainable Units	46 (25%)	63 (39%)	68 (42%)	71 (42,3%)	77 (44%)
<i>including Extra Sustainable Units</i>	0	7 (4%)	15 (9%)	17 (10%)	16 (9%)
Non-sustainable Units	91 (49%)	92 (58%)	85 (53%)	83 (49,4%)	92 (52%)
Units with unclear status (not enough data for ranking)	49 (26%)	5 (3%)	8 (5%)	14 (8,3%)	8 (4%)

Sustainability of Responding Ukrainian TUs (2009)



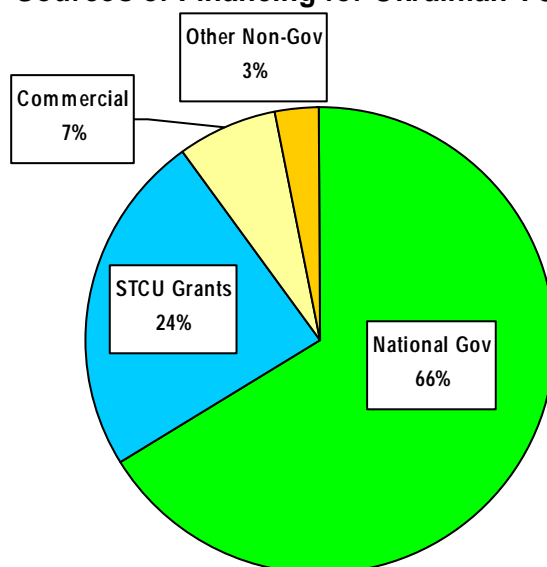
Financing Sources

Government financing still holds the largest share of Ukrainian TU funding (66% of total), and this year survey showed the same level of it as two previous surveys. The share stays the biggest of all the Recipient Parties surveyed. STCU grant funding continues to be the largest portion of non-governmental funding received by the respondent TUs (70%), but represents only one fifth of the total budgetary financing of the respondent Ukrainian TUs. It is still the smallest share of STCU funding among all the respondents from the Recipient Parties.

Table UA-2. Source of Budgetary Financing for Respondent Ukrainian TUs

	2005	2006	2007	2008	2009
National Government	59%	57%	65%	65%	66%
Non-government	41%	43%	35%	35%	34%
• Share from STCU Grants	20%	28%	21%	22%	24%
• Share from Private Commercial Entities	10%	6%	4%	9%	7%
• Share from Other Domestic Non-Government Organizations (except STCU)	Combined Data Provided: approx. 11%	4%	1%	1%	2%
• Share from Other Foreign Non-Government Organizations (except STCU)		5%	9%	3%	1%

Sources of Financing for Ukrainian TUs (2009)



Characteristic of Technical Units

Table UA-3. Quantity of STCU Projects

	Total			
	2006	2007	2008	2009
# of Responding TUs with 1 Project	116 (73% of total)	118 (65% of total)	122 (73% of total)	134 (76%)
# of Responding TUs with 2 Projects	31 (19% of total)	32 (18% of total)	35 (21% of total)	26 (15%)
# of Responding TUs with 3 Projects	9 (6% of total)	7 (10% of total)	9 (5% of total)	11 (6%)
# of Responding TUs with 4 Projects	2 (1% of total)	3 (4% of total)	2 (1% of total)	5 (3%)
# of Responding TUs with 5 Projects	1 (0.6% of total)	1 (3% of total)		1 (0,6%)

* 2005 - Data Not Available

Collaboration with Foreign Countries

As in previous surveys the USA is the most often country partner, which is mentioned this year by 97 TUs/ 54%. The second most important country-partner is Germany, which is mentioned by almost half of TUs (80/45%). Then there are many contacts with France 56/31% and Russia 53/30%, Poland 42/24%, UK40/ 23%, Canada 33/ 19%, Italy 26/15%, Spain 23/ 13%, Austria 18/10% and many other countries all over the world.

Profile of Technical Unit Scientists

Table UA-4. Average Age of Scientists in Responding Ukrainian TUs

	Average Age (years)				
	2005	2006	2007	2008	2009
All Researchers	48	46	46	44	46
Doctors of Science	60	64	59	58	59
Candidate of Science (PhD)	50	49	48	48	47

Table UA-5. Proportions of Scientists in Responding Ukrainian TUs, by Age

	%of TU Staff				
	2005	2006	2007	2008	2009
Under 35 years old	29	25	22	20	27
Retired	24	20	21	20	29

STCU Impact on Promoting S&T Excellence

Technology Promotion & Patenting

The Ukrainian respondents reported 655 technologies with potential for the market, and this number is the biggest through all surveys. 40% of these technologies (the same percentage as last year) are already marketed and 61% patented. But only 11-12% are incorporated into business plans and supported by marketing research. 4% of technologies received STCU assistance in their promotion. These numbers are not statistically different from those in the 2006-2008 survey.

Table UA-6. Technologies Reported by Responding TUs

	Total and % of Total				
	2005	2006	2007	2008	2009
Technologies	215	567	513	604	655
- implemented in market	<i>Not Available</i>	131(23%)	134 (26%)	240 (40%)	254 (39%)
- patented	" " "	300 (53%)	291(56%)	487 (81%)	398 (61%)
- supported by a business plan	" " "	55 (10%)	48 (9%)	76 (13%)	74 (11%)
- supported by marketing research	" " "	42 (8%)	38 (7%)	49 (8%)	76 (12%)
- applied for STCU technology promotion assistance	" " "	39 (7%)	24 (5%)	33 (5%)	18 (3%)
- received STCU assistance		36(6%)	23 (4,5%)	39 (6%)	25 (4%)

Comment: Total percentage exceeds 100% because respondents could choose multiple categories in the question

Through 2005-2008, the surveys found a decreasing number of total patents received during the year. In 2009 there is a slight increasing in number of national patents (193); however the number of foreign patents is the least (4). 13% of national patents and half of foreign patents were received with a help of STCU.

Table UA-7. Patents Obtained by Responding TUs

	2005		2006		2007		2008		2009	
	Total	With STCU	Total	With STCU	Total	With STCU	Total	With STCU	Total	With STCU
National (Ukrainian) Patent Applications	283	58 (20%)	240	43 (18%)	205	24 (11.7%)	187	53 (28%)	193	26 (13%)
Foreign or International Patents	84	6 (7%)	13	2 (15%)	16	4 (25%)	20	13 (65%)	8	4 (50%)

Level of International Collaboration & Scientific Activity

Through 2005-2008 the quantity of participation in international scientific conferences grows constantly and is maximal this year (1506 cases). Other indexes vary from year to year, in average they are about 800 joint publications, about 250 joint scientific projects, about 100 trainings abroad. In 2009 about half of joint scientific projects with colleagues abroad are connected with STCU. Generally, STCU involvement has stayed approximately 25 % of all reported activities across all International Collaboration categories and Scientific Publication categories.

Table UA-8. International Collaborative Activities

	2005		2006		2007		2008		2009	
	Total	With STCU	Total	With STCU	Total	With STCU	Total	With STCU	Total	With STCU
Participation in International Conferences	1136	416 (36%)	1406	294 (21%)	1073	346 (32%)	1383	292 (21%)	1506	296 (20%)
• within the country	579	182 (31%)	837	114 (14%)	525	133 (25%)	865	149 (17%)	999	155 (15%)
• Abroad	557	234 (42%)	569	180 (32%)	548	213 (39%)	518	143 (28%)	507	141 (28%)
Joint Publications	642	214 (33%)	958	284 (30%)	908	246 (27%)	749	235 (31%)	689	197 (29%)
Joint Scientific Projects	157	78 (49%)	295	119 (40%)	267	114 (42%)	282	126 (45%)	268	144 (54%)
Contracts with Business Partners	158	44 (28%)	226	78 (35%)	254	64 (25%)	195	51 (26%)	191	59 (31%)
• within the country	80	22 (27%)	115	24 (21%)	176	22 (12.5%)	129	32(25%)	152	43 (29%)
• From Abroad	78	22 (28%)	111	54 (49%)	78	42 (53%)	66	19 (29%)	39	16 (41%)
Training abroad	84	19 (22%)	126	19 (15%)	103	6 (5.8%)	110	19 (17%)	120	23 (19%)

Table UA-9. Scientific Publications

	2005		2006		2007		2008		2009	
	Total	With STCU	Total	With STCU	Total	With STCU	Total	With STCU	Total	With STCU
Monographs	29	16 (55%)	97	12 (12%)	82	10 (12%)	84	13 (15%)	81	7 (9%)
• within the country	23	14 (61%)	55	11 (20%)	65	7 (11%)	63	7 (11%)	63	2 (3%)
• Abroad	6	2 (33%)	42	1 (2%)	17	3 (18%)	21	6 (29%)	18	5 (28%)
Articles	654	165 (25%)	2135	496 (23%)	2338	479 (20%)	2231	431 (19%)	2656	512(19%)
• within the country	376	90 (24%)	1349	278 (20.6%)	1410	277 (19%)	1453	260 (18%)	1866	292(15%)
• Abroad	278	75 (26%)	786	218 (27.7%)	928	202 (22%)	778	171 (22%)	790	220(28%)
Abstracts of the conferences	596	196 (33%)	1625	470 (29%)	2621	589 (22%)	2217	557 (25%)	2248	627 (28%)
• within the country	297	74 (25%)	925	201 (22%)	1688	299 (18%)	1411	295 (21%)	1580	371(23%)
• Abroad	299	122 (40%)	700	269 (38%)	933	290 (31%)	806	262 (33%)	668	256 (38%)

Summary Comparison of STCU Recipient Countries Surveyed in 2009

	Azerbaijan	Georgia	Moldova	Ukraine	Total
# of TUs responses received	20	24	15	177	236
Source of Financing (% of TU budget)					Average %
National Government	53%	37%	53%	66%	52%
Non-government	47%	63%	47%	34%	48%
- STCU Share of Total Budget (Government + Non-government Financing)	31%	37%	32%	24%	31%
- STCU Share of Non-government Funding Portion	66%	59%	68%	70%	66%
Technical Unit Sustainability Evaluation					% of total
Sustainable Units	7 (35%)	11 (46%)	8 (53%)	77 (44%)	103 (44%)
<i>including Extra Sustainable Units</i>	1 (5%)	0	0	16 (9%)	17 (7%)
Non-sustainable Units	10 (50%)	13(54%)	7 (47%)	92 (52%)	122 (52%)
Units with unclear status (not enough data for ranking)	3 (15%)	0	0	8 (4%)	11 (4%)
Areas of STCU Project and Supplemental Activities					
Technologies that are Market-Ready	37	59	24	655	775
International Collaboration Supported by STCU					Average %
Participation in International Conferences within Country	3 (6%)	5(22%)	7 (17%)	155 (15%)	170 (15%)
" " Conducted Abroad	12 (29%)	16(24%)	12 (28%)	141 (28%)	181 (28%)
Joint Scientific Articles with Foreign Colleagues	8 (23%)	13(25%)	24 (35%)	197 (29%)	242 (28%)
Participation in Joint Research Projects (with foreign partners)	18 (56%)	16(29%)	9 (40%)	144 (54%)	187 (45%)
Contracts with Private Companies within the Country	1 (8%)	0	0	43 (29%)	44 (9%)
" " From Abroad	1 (33%)	2(14%)	0	16 (41%)	19 (22%)
Participation in Training Programs Abroad	3 (38%)	2(6%)	6 (46%)	23 (19%)	34 (27%)
Scientific Publishing Activity Supported by STCU					
Scientific Articles within the Country	11 (11%)	17 (10%)	14 (27%)	292(15%)	334(16%)
" " Abroad	11 (14%)	12 (8%)	19 (28%)	220(28%)	262(43%)
Abstracts Submitted to Conferences within the Country	15 (19%)	8 (20%)	7 (17%)	371(23%)	401(20%)
" " Abroad	29 (32%)	18 (23%)	17 (34%)	256 (38%)	997(32%)
Patenting Activity Supported by STCU					
National Patents	0	1 (25%)	0	26 (13%)	27(48%)
Foreign/International Patents	0	0	1 (100%)	4 (50%)	5(38%)

Summary Comparison of STCU Technical Units Surveys (2006-2009)

	2006 4 countries (no Moldova)	2007 all 5 countries	2008 4 countries (no Uzbekistan)	2009 4 countries (no Uzbekistan)
# of TUs responses received	218	209	210	236
Source of Financing (% of TU budget)	Average %	Average %	Average %	
National Government	48%	50%	46%	52%
Non-government	52%	50%	54%	48%
- STCU Share of Total Budget (Government + Non-government Financing)	36%	38%	33%	31%
- STCU Share of Non-government Funding Portion	58%	76%	62%	66%
Technical Unit Sustainability Evaluation	Total, (% of total)	Total, (% of total)	Total, (% of of total)	% of total
Sustainable Units	78 (36%)	82 (39%)	84 (40%)	103 (44%)
<i>including Extra Sustainable Units</i>	9 (4%)	15 (7%)	20 (10%)	17 (7%)
Non-sustainable Units	129(59%)	119 (57%)	112 (53%)	122 (52%)
Units with unclear status (not enough data for ranking)	11 (5%)	8 (4%)	14 (7%)	11 (4%)
Areas of STCU Project and Supplemental Activities				
Technologies that are Market-Ready	531	628	751	775
International Collaboration Supported by STCU	Total (avg %)	Total (avg %)	Total (avg %)	Total (avg %)
Participation in International Conferences within Country	147 (21%)	147 (23%)	160 (13%)	170 (15%)
" " Conducted Abroad	250 (33%)	233 (33%)	182 (25%)	181 (28%)
Joint Scientific Articles with Foreign Colleagues	318 (24%)	366 (33%)	275 (32%)	242 (28%)
Participation in Joint Research Projects (with foreign partners)	146 (41%)	157 (43%)	155 (47%)	187 (45%)
Contracts with Private Companies within the Country	24 (11%)	29 (18%)	51 (7%)	44 (9%)
" " From Abroad	47 (48%)	58 (26%)	20 (16%)	19 (22%)
Participation in Training Programs Abroad	11 (8%)	26 (17%)	21 (7%)	34 (27%)
Scientific Publishing Activity Supported by STCU	Total (avg %)	Total (avg %)	Total (avg %)	Total (avg %)
Scientific Articles within the Country	313 (19%)	339 (17%)	326 (16%)	334(16%)
" " Abroad	279 (27%)	261 (35%)	227 (19%)	262(43%)
Abstracts Submitted to Conferences within the Country	226 (20.5%)	343 (18%)	32 (24%)5	401(20%)
" " Abroad	339 (38%)	352 (28%)	320 (16%)	997(32%)
Patenting Activity Supported by STCU	Total (avg %)	Total (avg %)	Total (avg %)	Total (avg %)
National Patents	51 (17,7%)	29 (18%)	58 (20%)	27(48%)
Foreign/International Patents	2 (0.6%)	6 (15%)	13 (16%)	5(38%)