

TOMSK STATE UNIVERSITY

# ANNUAL REPORT

Creating opportunities  
to improve the world  
around us

2011


PROJECTS: 9 (4 IN THE REPORT)  
HOURS OF TEAM INVOLVEMENT: 24044  
PEOPLE DIRECTLY IMPACTED: 834  
TOTAL INCOME OF PROJECTS PARTICIPANTS: \$ 1 958 134



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RUSSIA

SIFE

TOMSK STATE UNIVERSITY

# GREEN TRANSPORTATION

## Factors

### ECONOMIC:

- Gasoline prices in Russia have shown stable long-term growth: 6.5% in the first 7 months of 2011
- Russia has a third of world natural gas reserves
- Using compressed natural gas as a fuel enables toxic exhaust fumes almost halves fuel costs

### SOCIAL:

- Drivers had a negative attitude towards compressed natural gas
- Measures by local and national authorities to support conversion to compressed natural gas were ineffective

### ENVIRONMENTAL:

- The annual cost of the environmental damage from vehicle exhaust fumes in Russia is \$3.4 billion
- Cars in Russia produce 14,000,000 tonnes of harmful emissions a year, 60% of all non-household atmospheric emissions
- Using compressed natural gas as a fuel cuts harmful emissions by more than 25%



BUS WITH CNG EQUIPMENT



MOTORCAR WITH CNG EQUIPMENT

## The needs of car owners and bus owners:

- Lower fuel costs
- Information on existing possibilities for installing compressed natural gas equipment
- Funding for acquiring and installing compressed natural gas equipment

## Opportunities for the target audience:

- We developed and implemented a special bank loan arrangement for vehicle owners converting to compressed natural gas 226 cars converted to compressed natural gas, including 188 under the Green Transport loan program
- We launched a public awareness campaign telling drivers about the economic and environmental benefits of compressed natural gas

## Business, economic and entrepreneurial ideas:

With the help of a local bank, a unique type of loan for car owners converting their vehicles to compressed natural gas has been created. This product enables the bank credit instrument to be repaid from the fuel cost savings, without paying any initial installment. After repayment of the loan, the fuel cost savings turn into regular income.



DRIVERS' SURVEY

## Main results:

### QUANTITATIVE:

- Project participants got an average annual saving of \$750 per car
- Project participants got an average monthly saving of \$540 per minibus taxi
- Company installing the compressed natural gas equipment in 6 months received a 26% rise in demand for its services, and a \$38,305 increase in profits

### QUALITATIVE:

- Vehicle owners taking part in the project have a greater sense of stability, and can make long-term plans thanks to their increase in income
- Third parties have also benefited from the project:
  1. The bank improved its image, and now positions itself as a socially responsible company.
  2. People in the city breathe cleaner air every day.

# GIVE WARMTH

## Factors

### ECONOMIC:

- Average disability benefit in Russia is 28% below the average minimum wage
- Demand for handmade products is increasing in Russia

### SOCIAL:

- People with disabilities make up 10% of Russia's population
- Employers don't want to take on the difficulties associated with employing people with disabilities: just 20% of people with disabilities in Russia have a full-time job (the global average is 44%)
- Social protection in Tomsk region for people with disabilities is poor

### ENVIRONMENTAL:

- Handmade woolen and felt products are environmentally friendly and safe
- Wooden barrels are ecologically the safest packaging for taiga honey



## The needs of people with disabilities:

- Social interaction and communication
- Self-fulfillment, recognition, social adaptation
- Extra income
- The chance of an independent life

# TAIGA GOLD

## Factors

### ECONOMIC:

- Favorable climate and unique flora of the Tomsk region serve as a comparative advantage to the quality of honey
- Beekeeping is highly profitable in our region
- Honey prices on the global market doubled in the past 3 years
- World honey production is expected to increase by 35% between 2011 and 2015, according to US firm Global Industry Analysts (GIA)
- Honey production in Tomsk region is now 17 times less than it was in the 1970s
- Tomsk region is located in the area having the 2nd annual honey yield in Russia

### SOCIAL:

- Quality of life and living standards in Russia are considerably lower in rural areas than in towns and cities
- Rural unemployment in Tomsk region is 62%
- More than 95% of honey in Russia is produced by amateur beekeepers

### ENVIRONMENTAL:

- Beekeeping is very important for the ecosystem and agriculture as a whole
- Tomsk region and Taiga as its vast part has unique areas that are environmentally safe and suitable for beekeeping

## The needs of beekeepers:

- Knowledge and skills related beekeeping
- Funding for business expansion
- Expansion in sales channels, as the lack of them is the main factor restricting apiary growth

## Opportunities for the target audience:

- We developed and introduced an annual training program to improve knowledge and skills regarding beekeeping issues. 16 beekeepers were trained this year
- We organized the Tomsk Oblast Beekeepers' Association, to implement our own programs (training, funding, agricultural insurance) for developing the region's beekeeping industry. The Association now comprises 20 beekeepers
- We set up a company called Taiga Gold to provide the logistical infrastructure for the sale of the Beekeepers' Association's members' products
- 30% of Taiga Gold's profits are reinvested developing the region's beekeeping industry



APIARY OF ONE OF THE PROJECT PARTICIPANTS

## Business, economic and entrepreneurial ideas:

We created a sustainable business model for developing beekeeping in Tomsk region which offers its own business tools. The competitive advantage of this model is based on an effective combination of our region's unique natural resources, the experience of professional beekeepers and regular access to private and state funding as well as its own business tools.

## Main results:

### QUANTITATIVE:

- In summer 2011, the beginning beekeepers saw their profits increase by 70% on average, while the experienced beekeepers' profits rose by 15%
- Taiga Gold company sold more than a tonne of honey produced by the project's beekeepers, to a total value of \$19,517
- Taiga Gold company has signed 5 contracts worth a total of \$6,986 with major Tomsk companies to supply them with honey in original souvenir containers

### QUALITATIVE:

- The beekeepers became more confident in the future prospects of their business
- The establishment of the Beekeepers' Association created networking opportunities for project participants

## Opportunities for the target audience:

- We created a community for people with disabilities
- We developed a guide to felt making and working with felt
- We found sales markets for the products made
- The handicraft activities helped people with disabilities to develop their motor skills

## Business, economic and entrepreneurial ideas:

People with disabilities are often highly skilled, with highly developed creative abilities – a labor resource underappreciated and underused in Russia. Involving this unique resource in making unique products, with strong incentive for the participants (self-development and self-fulfillment) creates the preconditions for the project sustainability. The project's development was partially integrated with our other projects (Green Transportation and Taiga Gold), and draws on the support of participants in them.

## Main results:

### QUANTITATIVE:

- 23 people with disabilities taking part in the project, with the support of our team, had successful experience of selling their products on the market for handmade goods
- 1 person found full-time work, with a salary of \$320 a month – about the average for Tomsk
- 2 people made the production and sale of handmade items their regular source of income

### QUALITATIVE:

- According to experts, all the project participants became more confident in themselves and their own abilities
- According to a survey of their parents, 87% of the participants noticeably improved their fine motor skills
- According to a survey of the participants, they gained good practical experience of making independent decisions, and learned how to plan their life



# ECONOVUS

## Factors

### ECONOMIC:

- Russia's transition from an economy based on raw materials to one based on innovation
- Investment in the development of innovative technologies in Russia has almost trebled since 2005
- Few scientific ideas are commercialized (1.7%) in Russia
- Tomsk has a huge number of students (20% of the population) and scientific innovators

### SOCIAL:

- The scientific profession is not very attractive in Russia because of small salary
- 60% of higher education institution graduates have no work experience in their major specialist area

### ENVIRONMENTAL:

- Every year, we produce more than four billion tonnes of harmful household and industrial waste globally, 70% of which cannot be reused or recycled
- Every year, Tomsk produces roughly three million cubic meters of contaminated waste water and 36,000 tonnes of solid air pollutants



## The needs of scientists and students:

- Scientists needed material support and an improved image for the research profession
- Students needed practical experience and help finding work in their specialist areas
- Local residents needed better environmental conditions

## Opportunities for the target audience:

- We selected 17 students and 15 scientists and brought them together into temporary working groups to commercialize their scientific ideas
- We taught students and scientists the basics of technology commercialization and organizing starting up an innovative business (12 workshops)
- We consulted working groups on preparing grant applications for 'project funding, starting up innovative companies and on their initial activities

## Main results:

### QUANTITATIVE:

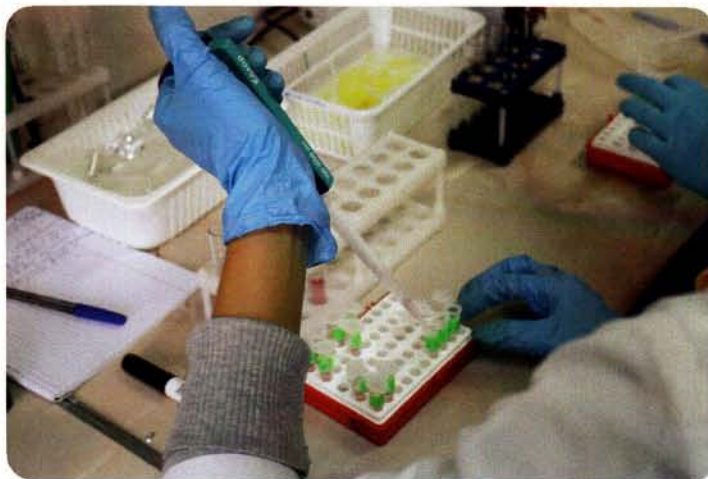
- 3 new innovative companies working on environmental problems and ensuring a long-term improvement in living standards for the project participants set up
- 3 business development grants totaling \$86,000 won with our help
- Participating students employed (their average monthly income increased by \$420)
- The average monthly income for the 15 scientists involved in the project increased by 35% (\$540)
- Contracts for services worth a total of \$67,000 won by the innovative companies with our help
- 100 tonnes of chemical waste processed; harmful atmospheric emissions reduced by 2.5 million cubic meters

### QUALITATIVE:

- 17 students gained experience of working in their specialist area, and become more confident of their competitiveness in the labor market
- When questioned, 14 out of the 15 scientists said they felt recognition for the results of their work and satisfaction of their need for respect and self-fulfillment

## Business, economic and entrepreneurial ideas:

Commercializing scientific ideas aimed at solving environmental problems through starting up new innovative companies. Bringing together two unique resources: students, with specialist knowledge, and scientists, with ideas relating to the environment. Integration of these two highly specialized resources provides the project with a competitive advantage.

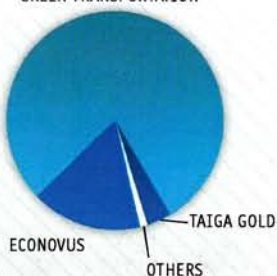


MICROORGANISMS USED BY BIO-RETOX, LLC

## Project participants:

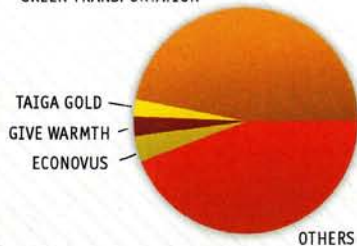
TOTAL INCOME  
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GREEN TRANSPORTATION



PEOPLE DIRECTLY IMPACTED  
834 persons

GREEN TRANSPORTATION



## Team statistics:

MEMBERS  
2004 - 2011

