МОНГОЛ УЛСЫН ЗАСГИЙН ГАЗАР

БОЛОВСРОЛ,
СОЁЛ,
ШИНЖЛЭХ УХААНЫ ЯАМ

COUNTRY REPORT OF MONGOLIA
Technology Transfer: Challenges, Opportunities and Successful Cases

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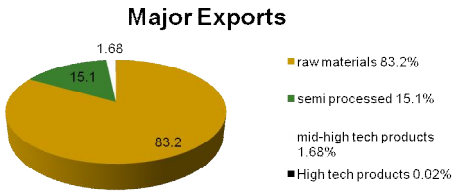
CONTENT

Basic information

- Land: 1.5 mln km^2
- Population: 2.7 mln
- Geography: steppe, mountains, dessert
- Administration: UB and 22 aymags
- Seasons: winter, spring, summer, autumn
- Sec. Education:12 (5+4+3)years
- Literacy: more than 97.8%
- Governance: Parliamentary

Source: Statistics, NSO, 2010.



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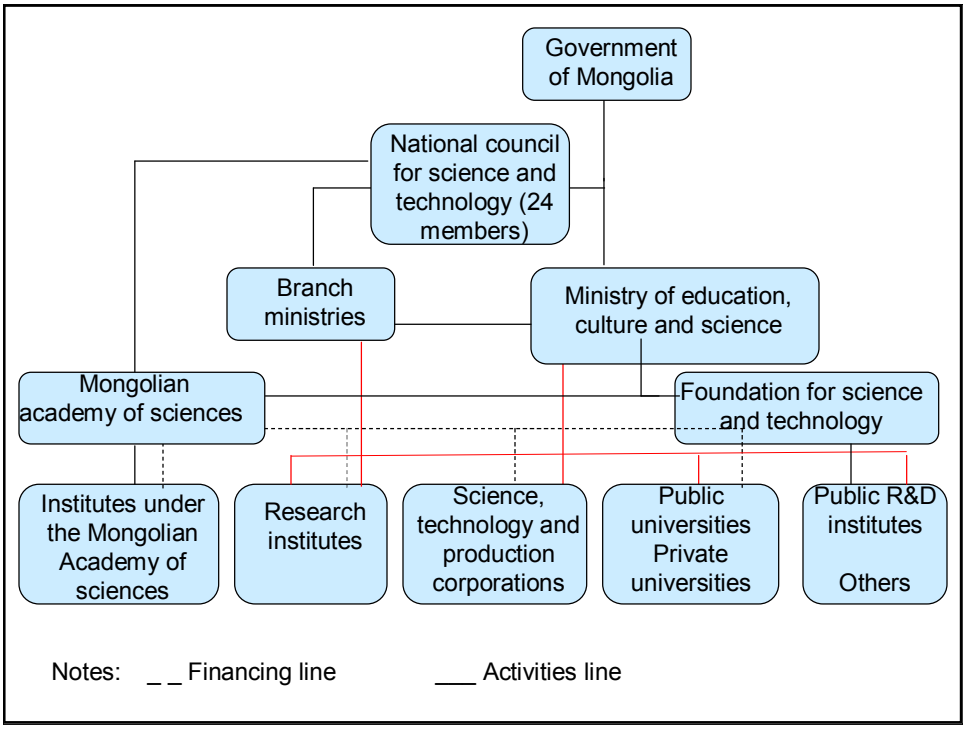
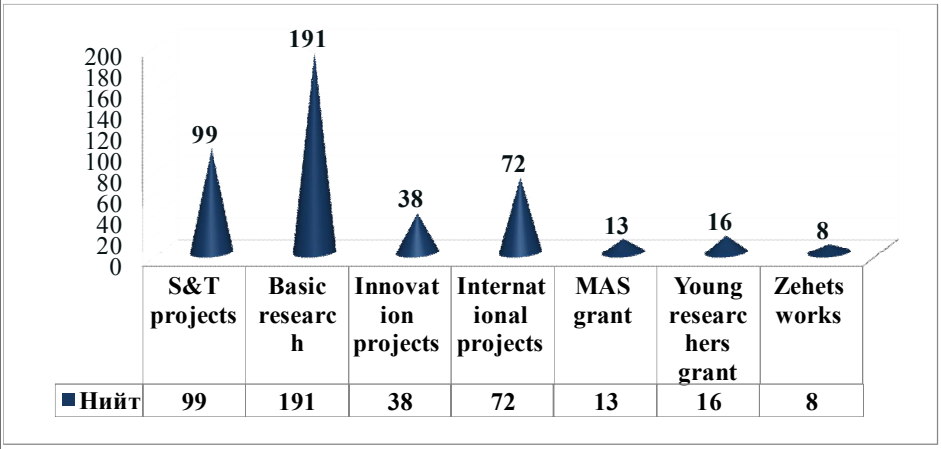


Scientific organizations

Ownership/type	Total
Government	50
Private	9
Universities	11
Total	70

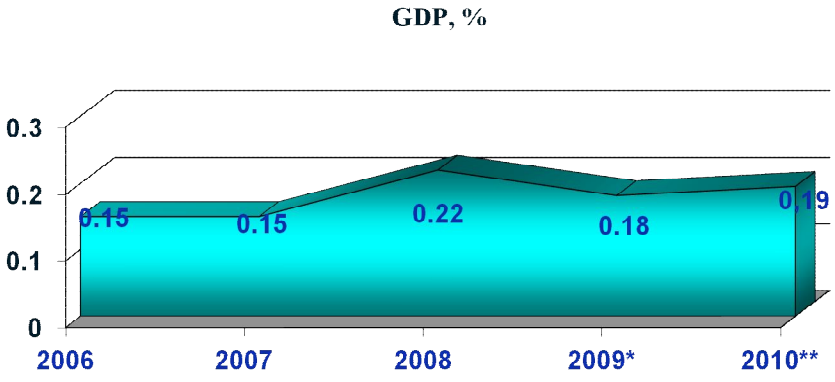
Source: Stats bulletin of education, culture and science sector, MECS, 2010

The number of R&D work funded in 2010



Source: Science and technology Foundation statistics, 2010

The comparison of science funds with GDP for the last 5 years



Source: NSO

HUMAN RESOURCES

No	Indicators	Total	Full time staff /according to the age/				
			Up tp 30	31- 40	41- 50	51- 60	Over 60
1	**Total employeers**	**2517**	**739**	**572**	**546**	**466**	**194**
	Women	**1312**	**386**	**340**	**351**	**206**	**29**
2	**Have academic degree or rank**	**1279**	**275**	**341**	**282**	**247**	**134**
	Women	**649**	**157**	**188**	**180**	**109**	**15**
	Sc.D degree	114	0	3	11	44	**56**
	Women	16	0	1	2	10	**3**
	Ph.D degree	428	7	83	133	138	**67**
	Women	196	4	49	74	59	**10**
	Master	737	268	255	138	65	**11**
	Women	437	153	138	104	40	**2**
3	**Academic rank** (11=13+15+17)	**281**	**0**	**20**	**42**	**108**	**111**
	Women	**55**	**0**	**6**	**15**	**27**	7
	Academician	36	0	0	0	9	**27**
	Women	3	0	0	0	1	**2**
	Professor	139	0	1	14	61	**63**
	Women	21	0	1	4	13	**3**

The Global Competitiveness Report 2009-2010

- IP protection – 118th out of 133 countries

Patent in the world

- Citizenship of applicant: MN
  - Files for 45 new products
    - Co-inventor or residents of foreign countries with Mongolian origin (US, Germany, Japan, Korea)
- Country of origin: MN
  - 9 files for patent

IPRs generated within the framework of state budget funded R&D

Name		2006	2007	2008	2009	2010
1. Patent		52	51	41	34	27
Out of:	national	50	49	37	31	24
	international	2	2	4	3	3
2. Certificate of useful design		55	73	89	32	13
Out of:	Product design	22	47	39	5	2
	New product	33	26	50	27	11
3. Copyright certificate		16	14	76	103	41
Out of:	national	16	14	76	103	41
	international	0	0	0	0	0

Source: Stats. bulletin of education, culture and science sector, MECS, 2010

IPRs generated by R&D

	Organizational name	Total	Copyright	Patent
MAS and corporations		**724**	**351**	**373**
1	Technique and technical sciences	200	88	112
2	Natural sciences	266	147	119
3	Agricultural sciences	192	90	102
4	Health sciences	64	25	39
5	Social and humanitarian sciences	2	1	1
Universities		**198**	**97**	**101**
6	NUM	52	34	18
7	MUST	64	23	41
8	University of Health sciences	47	21	26
9	University of Agriculture	35	19	16
	Total	**922**	**448**	**474**

Source: D.Regdel, M.Delegmaa et al "IPRs generated by scientists". 2008

Universities and their IPRs

- **Patent owner- 4**
  - Institute for light industry research and development–1 (3074)
  - Ulaanbaatar university – 2 (3151, 3155)
  - Institute for physics technologies–1 (3165)
- **Owner of certificate of useful design- 21**
  - Ulaanbaatar university– 9
  - Institute for light industry research and development– 10
  - Institute for plan, farming research and training - 2
- **Owner of trademark- 2**
  - Institute of international studies
  - Institute of Ireeduy

Facts

- License agreements in industry
  - New product -79
  - Trademark-67
  - Useful design-58
  - Product design-5

Source: IPOM, 2011

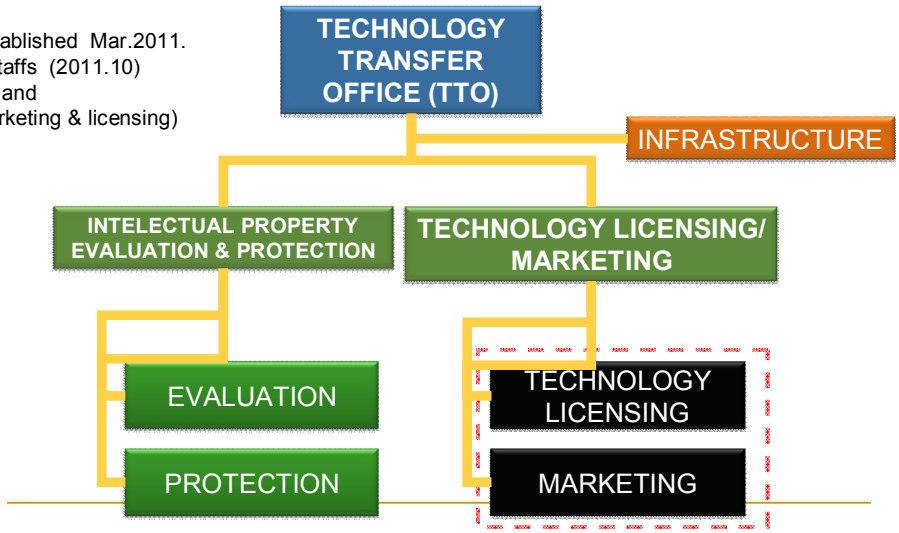
Establishment of units promoting technology transfer and regulating IPRs

Institution	Unit name	Year of establishment
Mongolian academy of sciences	Technology transfer center	2000
University of Agricultural Sciences	Extension center	2007
National university Of Mongolia	Technology transfer office	2011

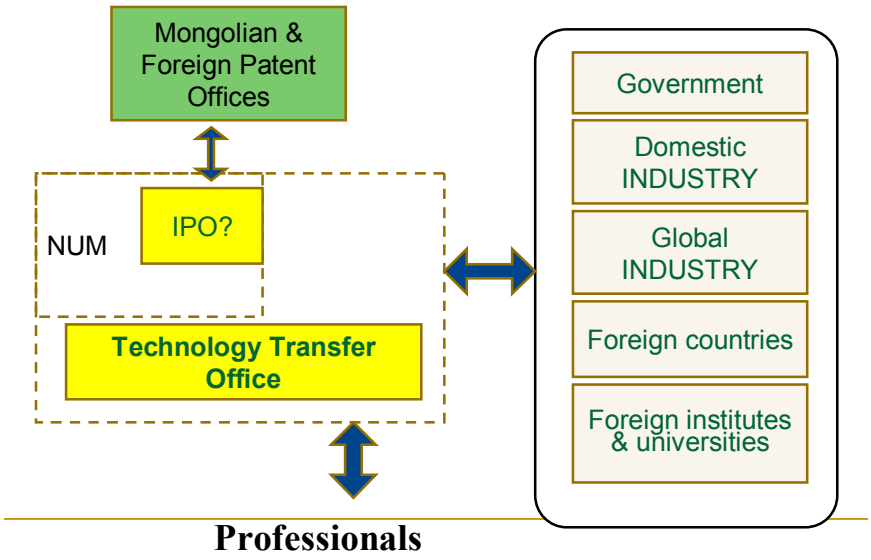
Source: Stats bulletin of education, culture and science sector, MECS, 2010

Technology Transfer Office of National University of Mongolia

Established Mar.2011.
2 staffs (2011.10)
(IP and
marketing & licensing)



TTO linkage to other organizations



Regulations of NUM

- Policy on IP, ratified on October, 2011
- Guideline to transfer technology, ratified on October, 2011

Visit www.num.edu.mn

Valueing IPRs in privatization of scientific organizations

Organization	Year	IPR funds /million tugrics/
Huns Tech	2007	~380
Electronic, technique and machinery studies	2007	~640

Note: The practice was initiated in the process of privatization of energy sector. The guideline to assess the IPRs was approved by the State property commission and MECS in 2007.

Source: The activities report of MECS, MECS, 2008

CONTENT

LAWS

- Constitution of Mongolia (1992)
- Law on National Security (2001)
- Conceptions of Mongolian National Security (1994, 2010)
- Conceptions of development of high technology industry (2010)
- Government policy on science and technology (1998)
- Law on science and technology (1998, 2006)
- Law on transfer of technology (1998, *)
- Law on status of Academy of science (1996)
- Law on higher education (2002)
- Law on patent (1993, 2006)
- Law on copyright (1993, 2006)

* under construction in the meantime

THE LAW ON SCIENCE AND TECHNOLOGY

- Finance 1.5 per cent of GDP to science and technological sector
- The ordering Ministry owns the results and possesses the responsibility to commercialize the S&T results within 2 years after the completion of the S&T project.
- Finance at least 1 per cent of foreign aids and loans for scholarships of these young researchers and refining the infrastructure of laboratories

MASTER PLAN ON SCIENCE AND TECHNOLOGY DEVELOPMENT up to 2020

- The vision of the Mongolian S&T in 21st century follows the primary principle to “be a nation developing the science based on new knowledge and progressive technology”, to practice the national innovation system as a driving force for social and economic development for 2020, and to ensure the secure and quality living of the people continuously supporting the science and technology progress and development.

MASTER PLAN ON SCIENCE AND TECHNOLOGY DEVELOPMENT up to 2020

- The mission of the science and technology of Mongolia is *to practice the effective management and finance systems based on the social and market demands, changes in the quality of demand, ensuring ecological balance, gaining comparative advantage through enhanced competitiveness of small and medium enterprises, ensuring the quality and secure living of the people.*

MASTER PLAN ON SCIENCE AND TECHNOLOGY DEVELOPMENT up to 2020

- Goal 1. Establish and develop a competitive R&D sector
- Goal 2. Create an effective national innovation system
- Goal 3. Create a legal and institutional system of protecting and utilizing the results of R&D
- Goal 4. Reforming economy on the basis of technological innovation
- Goal 5. Develop an effective international science and technology cooperation

Goal 3. Create a legal and institutional system of protecting and utilizing the results of R&D

- **Strategy 3.1.** Improve the system of protecting and utilizing the intellectual property rights
- **Strategy 3.2.** Establish an information database of government-financed R&D results; support and stimulate the activities related to commercialization and popularization of research results

MASTER PLAN ON SCIENCE AND TECHNOLOGY DEVELOPMENT up to 2020

Implementation stages:

- First stage: 2007-2010
- Second stage: 2011-2015
- Third stage: 2016-2020

Second stage: 2011-2015

Activities	Time	Implementing organization	Expected outcome
A regulation on ownership, utilization of R&D results funded by state budget	2011-2012	MECS	A regulation shall be approved by respective bodies. Implementation of regulation.
Develop evaluation mechanism for effective utilization of IPRs generated by state owned institutes and universities	2012	MECS, IPOM, institutes and universities	Some of the IPRs shall be introduced into industry and service.
approve and implement methodology and standards for IPRs evaluation.	2012-2015	MECS, IPOM, MAS	Methodology and standards for R&D work evaluation shall be approved and implemented.
Valuation of intangible assets in S&T sector. Preparation of valuers and development of information database.	2012-2013	MECS, IPOM, Ministry of finance	The economic right of S&T sector shall be strengthened.

PENDING LAWS AND NATIONAL PROGRAMS

- Law on innovation
- Law on transfer of technology

- National program on technology
- National strategy of IPRs

* under construction in the meantime

CONTENT

1. Briefly about Mongolia
2. Status of science and innovation development
3. Science, technology and innovation policy and regulation
4. **Challenges**

Challenges

- The scientists and researchers have low awareness in IPRs
- Results of R&D are not fully utilized, and their intellectual property rights are not properly enforced
- Lack of application of up to date IPRs in R&D
- Lack of accurate, true and legitimate IP statistics
- No legal costs for international and domestic patent
- The regulation and coordination of IPRs is unclear
- List IPRs as intangible assets for accounting purposes

Thank you