ADDRESSING THE PROBLEM OF TAJIKISTAN'S ECONOMIC DEVELOPMENT STRATEGY

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World historical experience shows that successful development of any state largely depends on correctly selected strategic goals and priorities. In fact, there are plenty of examples showing that the choice of true directions has led to the successful and sustainable development of different countries, both large and small. However, there are reverse examples as well. A particularly representative example here is the experience of the U.S.S.R.—a country with huge material and human resources which, due to its poorly chosen development strategy, has ended up with economic degradation and disintegration.

Tajikistan, one of the union republics of that state, was the least advanced territory even in those days, and during the civil war in Tajikistan, its national economy slumped to a crisis level by 1995. It was not until the beginning of the 21st century that slight (and very slow) economic recovery was outlined. Under these conditions, efficient economic development (even if it was only catching up) is seen not just as an urgent, but as a vitally crucial task for Tajikistan. And elaboration and implementation of an appropriate development program is becoming of top priority.

Unfortunately, both the strategy and the programs adopted in this sphere are in many respects immature and underdeveloped, and they actually fail to meet the challenges the republic is currently facing, which first of all concerns its choice of basic priorities and ranking. Today, agriculture and the hydropower industry have been formally approved as the main areas in Tajikistan's economic development strategy. However, their priority is actually only declared, since no sufficient grounds for them currently exist.

The thing is that in the countries which have chosen agriculture as a primary vector of their economic development strategy, even under the most favorable natural and climatic conditions, effi-

cient development is hardly possible, not to mention a technological breakthrough. At best, such countries are attributed to the category of the so-called "banana republics." However, as we have already noted, there are quite a number of examples showing that the states which tend to enhance their power industries by primarily relying on available raw product resources can be developed rather successfully.

In present-day Tajikistan, the choice of agriculture as a strategic priority is a tribute to the traditions retained from the Soviet era. At that time, it was associated with the policy aimed at maintaining the cotton independence of the huge state. Besides, the rural economy of the Soviet Union comprised the entire cycle: from cultivation to complete processing. Therefore, although Tajikistan was a raw

Table 1

Key Assets of the Multipurpose Water Utilization System

Facility (Asset) Categories			Length (Quantity)
Channels:	Main	In earthen channels (km)	9.934
		In encasements (km)	9.206
	Inter-farm	In earthen channels (km)	2.806
		In encasements (km)	9.06
	Intra-farm	In earthen channels (km)	18.029
		In encasements (km)	1.012
	Chutes (km)		2.755
	Pipelines (km)		6.153
Pump stations:	Large, with water discharge of more than 10 m^3/sec (quantity)		39
	Inter-farm (quantity)		306
	Intra-farm (quantity)		709
Collectors and drainage systems	Main collectors (km)		0
	Inter-farm collectors (km)		2.301
	Intra-farm	Open drains and collectors (km)	5.061
		Closed drains (km)	4.041
		Vertical drains (quantity)	1.573
Irrigating wells (quantity)			1.03
Water basins:	More than 10 million m^3 (quantity)		3
	Inter-farm (quantity)		2
Key Asset Total Cost			1,364

Source: GEF MFSA Agency. Aral Sea Basin Development Program. "Integrated Water and Environment Management" Project. Tashkent, 2001 (MFSA: International Fund for Saving the Aral Sea).

product-oriented republic, it would receive funds from the national budget needed to maintain the proper development of all its sectors, including agriculture. And these funds were formed at the final stage of processing, which was basically carried out in other republics of the U.S.S.R.

However, under present-day market conditions, this agricultural orientation of independent Tajikistan, which is still (even increasingly) focused on production, but not on processing, has lost the above opportunities. This is best shown by the eventual result "achieved" in the production of cotton—the country's basic agricultural export crop. This sector has been consistently unprofitable since 1992, and by 2006, the total debt to investors reached $300 million, with an average volume of raw cotton production of 300÷400 thou tons per year during that period.

The state of affairs in other rural economy branches is hardly better. They are free of such huge debts, but there are no real incomes. In fact, today the whole agriculture sector is functioning at best in the "survival mode." Besides, Tajikistan's territory is located in an arid zone, which requires irrigation to ensure agricultural production. However, the irrigation and water utilization systems are divorced from the country's agricultural sector (as was customary in the U.S.S.R.). And though the water utilization system is for the most part financed by the state, including by foreign investments, the situation here is far from the best.

Today, Tajikistan's water utilization system represents a huge complex of various installations and facilities (Table 1) erected in Soviet times. Their average age is 38 years, which means that practically all of them have considerably exhausted their service lives.

What is more, over the last 15 years, Tajikistan's water utilization system has not only failed to receive the investments needed for reconstructing and modernizing its water facilities, it does not have the money for their operation and maintenance (apart from the funds appropriated by the government for emergency response measures). However, the total sum of investments required today to bring this entire system up to a suitable level amounts to $746 million. Actually, this figure corresponds to the funding shortfall in the previous year, which, to a certain degree, can be regarded as a loss. Hence, the total amount of rural system losses (including cotton-growing debts) and water utilization system losses (underfinancing of the water resource sector) exceed $1 billion, which is comparable to the republic's gross domestic product (GDP) (Table 2).

Table 2

GDP Dynamics and Forecast

Year	In fact			Forecast	
	1991	1995	2000	2010	2015
GDP, $ million	13,800	120.3	1,259.0	2,465.7	4,365.6

Source: GEF MFSA Agency. Aral Sea Basin Development Program. "Integrated Water and Environment Management" Project. National Report No. 2. Republic of Tajikistan, Dushanbe, 2003.

Tajikistan's economy is certainly developing today, and the country's GDP is increasing from year to year. However, the water utilization system's debts are also growing. According to the most conservative estimates, the country's annual expenses on operation and maintenance of its water utilization system amount to $53 million, and the total amount of real investments is several times less (Table 3).

Such is the present-day state of affairs in Tajikistan's water utilization system. Meanwhile, one of the government policy goals involves maintaining the country's agricultural independence. This

Table 3

Government Expenditures on Water Consumption and Water Supply Fees in 2000-2002

Source	Years	Million Somoni/Million USD		
		Plan	In fact	%
Deductions from republican budget on operational expenses	2000	3.0/1.363	2.964/1.347	98.8
	2001	3.6/1.636	3.6/1.636	100
	2002	4.6/1.703	4.6/1.703	100
	2003	5.2/1.733		
Water supply fees	2000	18.8/8.545	7.5/3.418	40
	2001	18.8/8.545	7.9/3.589	42
	2002	26.3/9.74	11.57/4.286	44
	2003	43.8/14.6	—	—
Local budget funds	2000	1.0/0.455	0.39/0.177	39
	2001	1.0/0.455	0.508/0.231	51
	2002	0.661/0.245	0.628/0.233	
	2003	0.8/0.266		
Funds from land tax arrears	2000	1.5/0.682	0.10/0.045	6.6
	2001	—	—	—
	2002	—	—	—
	2003	—	—	—
Funds for disaster clean-up operations	2000	0.10/0.045	0.084/0.038	84
	2001	0.70/0.318	0.70/0.318	100
	2002	1.2/0.44	1.2/0.44	100
	2003	—	—	—
Centralized capital investments	2000	1.0/0.455	0.97/0.44	97
	2001	1.3/0.59	1.3/0.59	100
	2002	1.64/0.607	1.64/0.607	100
	2003	1.5/0.500		
Total	2000	25.4/11.545	12.008/5.465	47
	2001	25.4/11.544	14.008/6.364	55.1

Source: GEF MFSA Agency. Aral Sea Basin Development Program. "Integrated Water and Environment Management" Project. National Report No. 2.

primarily concerns food supply independence, but at the same time the country is increasingly focused on cotton-growing exports. In fact, these tasks can be solved only if new irrigated areas are developed, since the republic's land endowment level (per capita) is the lowest in the Central Asian states: 0.13 ha of total areas and 0.08 ha of irrigated areas. The projected irrigation development program in Tajikistan is shown in Table 4 below.

Table 4

Prospects of Irrigated Areas Development in the Republic (*thou ha*)

Zones	2000, in fact	Growth potential, total	Until 2025		After 2025	
			Area growth	Total	Area growth	Total
Sogd Region	271.0	611	140	411	200	611
Khatlon Region	321.8	712	200	522	190	712
RSD*	101.6	225	123	225	0	225
Gorno-Badakhshan Autonomous Region (GBAR)	23.9	31	0	31	0	31
Republic in total	718.3	1,578	293	1,188	390	1,578

*Republic Subordination Districts.

Source: GEF MFSA Agency. Aral Sea Basin Development Program. "Integrated Water and Environment Management" Project. National Report No. 2.

Thus, the overall growth in irrigated land is expected to increase to 683,000 ha (95% of the currently available areas). If we assume that the specific cost of the irrigation of new lands is equal to that of the old lands, the required expenses will constitute 95% of the water utilization system key assets value, i.e. $1{,}364 \times 0.95 \approx$ \$1.3 billion.

However, in reality this sum should be even higher since today's value of the country's water utilization system key assets represents their residual cost, i.e. the initial cost reduced by the depreciation amount. Besides, it is much more difficult to develop new lands, since the most convenient lands have already been developed. And finally, today's land development costs are higher than the previous land development expenses due to inflation of all the expense-related items. According to a number of estimates, land development costs in Tajikistan currently amount to \$5,000 per ha, and about \$3.5 billion will be required to develop 683,000 ha of new irrigated lands. This means that \$2.5÷4.5 billion will be required just to bring the country's agriculture and water utilization system up to a normal level (repair old lands and develop new ones), which is more than the republic's GDP (see Table 2). What is more, no one can guarantee that the agricultural sector will start making profits, with annual expenses for its operation and maintenance being as high as \$103 million (53×1.95), i.e. almost 50% of the country's budget.

However, the most unpleasant thing here is that even if the republic manages to raise such funds, this problem will never be solved fundamentally. First of all, the entire gains from developing the new

irrigated lands could come to naught due to inevitable growth of the population[1] (Table 5). And besides, even temporary growth in the average provision of the republic's population with land is hardly possible since the development of new land requires a lot of time (dozens of years), and it will either "keep step" with the population growth rates or lag behind. Secondly, the development of new land will increase the need for water resources. But they are very limited in the region, and practically all of them are already being used (Table 5). Moreover, in view of the increasing demand for water to maintain restoration of the Aral Sea (~ 20 km^3 per year), serious water shortages are already anticipated in Central Asia. Certainly, Tajikistan is located in the streamflow generation zone: 65 km^3 of its surface waters are generated on its territory (55.4% of those are regional), but only 11÷14 km^3 are being used. However, under present-day political conditions, redistribution of the region's water resources for the benefit of Tajikistan will only lead to a conflict between the Central Asian countries, which could even develop into a "water war" as predicted by some Western political scientists.

Indeed, the water deficiency problem could be solved if the country's rural economy switches over to modern water saving technologies. But this will require an additional several billion dollars, which is absolutely unreal for today's Tajikistan. This gives rise to the following question: why, with all this rural sector inefficiency, was agriculture included on the top priority list of the country's economic development program? One of the explanations is that today (as well as in the past) this sector

Table 5

Population in 1989-2000 and Expected Population Growth Rates for 2010-2025

Planning zones	Population		Expected growth rate, *% for 10 years*	Expected population, *thousand people*		
	1989	2000		2002	2010	2025
Entire Tajikistan	5,092.6	6,127.5	20	6,647.5	8,452,6	10,000.0
Including in Dushanbe	590.6	561.9	7	604.9	769,1	910.0
Sogd Region	1,554.2	1,872.0	20	2,027.4	2,578,0	3,050.0
Khatlon Region	1,700.2	2,150.1	26	2,333.2	2,966,8	3,510.0
GBAR	160.9	206.0	28	219.3	278,9	330.0
RSD	1,086.7	1,337.5	23	1,462.7	1,859,8	2,200
Including in towns and settlements	1,655.1	1,626.3	8	1,761.6	2,240	2,650
In villages	3,437.5	4,01.2	27	4,885.9	6,212,6	7,350

Source: Agency GEF MFSA. Aral Sea Basin Development Program. "Integrated Water and Environment Management" Project. National Report No. 2.

[1] This is inevitable in the foreseeable future since the state is not even considering the question of birth reduction, and in a traditional Muslim society family planning is not provided for.

Table 6

Actual Water Consumption Level and Its Forecast in Central Asia
(*million m³*)

Country	Years		
	1990	1994	2010
Kazakhstan	10,136	9,718	9,390
Kyrgyzstan	4,910	4,940	7,820
Tajikistan	11,221	10,338	10,380
Turkmenistan	24,054	23,291	25,225
Uzbekistan	58,388	53,416	48,020
TOTAL consumption	108,654	101,703	100,835
Water resources	112,700	121,500	115,600

Source: *Interstate Council on the Aral Sea Basin Problems. Main Provisions of Aral Sea Basin Water Strategy*, Alma-Ata, Bishkek, Dushanbe, Ashghabad, Tashkent, 1996.

employs 70% of Tajikistan's population. And under the present severe social and economic conditions (especially taking into consideration the recent civil war, which split society) not only politicians, but also serious economists simply fear to openly admit that this sector is inefficient and to announce that its further extensive development should be given up. Especially since agriculture serves today as a real life-supporting sector not only for the farmers, but also for the other (30%) inhabitants of the republic, since it provides them with agricultural products at prices much lower than the world prices.

On the other hand, however, this is only affirmation of the situation that has developed in the country. Indeed, the people of Tajikistan should be grateful for their rural economy system, since it allowed them to survive in the most difficult years of 1992-1998. But after that, the political and socioeconomic situation in the republic essentially improved, and—what is more important—the economic development strategy should be aimed not so much at assessing the current situation, but at defining new, perspective goals. So it is detrimental to focus on agriculture, as this will preserve and retain the situation of 1991-1998, i.e. the situation of survival, not the situation of efficient development.

Moreover, the fear that the population will be strongly against agriculture being rejected as the main development priority is highly exaggerated. In fact, the population has already understood what is going on in reality and is now voting against agriculture in the most democratic way: the people are tending to leave their land, which cannot provide them with a worthy existence, and look for new jobs and employment. The number of labor migrants from Tajikistan to other countries (basically to Russia) amounts today, according to different estimations, to 0.5-1.2 million people. What is more, internal migration from rural districts to towns and cities, where employment conditions are a little better (for instance, in the sphere of trade and services) involves several hundred thousand people. And this is a very significant portion of the active population. According to national

statistics, in 1996, the able-bodied population amounted to 1,043,300 people, with the total population of 5,860,500.[2]

There is another reason why agriculture is considered one of the top priorities. This stems from the actual approach to compiling the priority list. And the main policy-making principle, which is currently applied in the republic, has been retained from Soviet times. In fact, this principle is based on the development level that has already been achieved. Technically, this approach works in the most primitive way: after receiving respective orders from the government, all the ministries, agencies, and major institutions (which, naturally enough, lobby departmental interests) develop and submit their perspective plans. In this situation, however, the concept of the strategy loses its meaning since it is replaced with a plan, the defectiveness of which had been proven by the entire history of Soviet development.

Let us dwell on this problem a while. The concept of the strategy itself can be considered based on two aspects. From the conceptual point of view, it serves as a guiding idea which defines both the general concept and the common plan aimed at achieving ultimate goals and objectives. In this sense, a strategy can define basic problems and areas of activity without specifying possible methods for their achievement. This is a so-called "strategy conception," which is primarily based on an arrangement-type approach and provides for more freedom and more uncertainty in actions. On the other hand, a strategy can be viewed in a more specific way—as a certain sequence of actions promoting the achievement of specific goals and objectives. This kind of strategy represents a so-called "program-oriented strategy," which is based on a systematic (programmed) approach involving all its respective attributes and, accordingly, a high degree of previously arranged actions.

In the latter case, *a linear strategy* is considered the most simple. In fact, it represents a certain chain of successive actions, each of them being either prearranged or dependent on the results of previous actions, not on subsequent ones. The potential of this kind of strategy is rather limited. Therefore it is only used when the whole process can be prearranged, subdivided into separate elements, and thoroughly analyzed. For example, it could be applied in a standard civil construction scheme. And there is another strategy type which occurs more frequently—when after receiving unsatisfactory results at a certain stage there is the possibility of returning to one of its previous stages. In this case, there is a sort of feedback between the strategy and its results, and what is more, it is possible to maneuver (although to a very limited extent) at this stage. This kind of strategy poses the danger of an endless loop or a vicious circle.

However, *a branched strategy* does not have this disadvantage. This type of strategy is originally based on parallel, even competing trends, which makes it possible to adjust it "while in progress." There is also *an adaptive strategy*, where only the first step (the first action) is defined. It is considered one of the most reasonable strategies, since each stage of such a strategy is selected on the basis of the most comprehensive information. Unfortunately, this kind of strategy does not make it possible to run and control the whole process—first of all, to manage the strategy-related terms and expenses, i.e. there is the danger of just "drifting with the current."

As far as its ideology is concerned, the adaptive strategy borders on *an increment strategy,* which is based on the following continuous process: current situation assessment → decision-making → adjustment → new situation assessment, etc. This is a rather prudent, almost errorless situation, but, unfortunately, such a strategy cannot be used when quick results are needed, since its implementation requires an unlimited time frame. Finally, there is *a random search strategy,* which lacks an original plan. However, it could be useful in situations with a high decision-making uncertainty level. One of its effective methods is "brainstorming."

[2] According to national statistics, after 1997 the size of the republic's able-bodied population increased to 2,000 thousand people due to the inclusion of women engaged in housekeeping in this category and due to expansion of borders of the economically active population age group. At the same time, however, from 1996 the population of Tajikistan increased insignificantly: in 2006 it totaled 6,400,000.

The choice of one of the above strategies depends on specific conditions. In situations where a number of difficult problems should be solved, a combination of several strategy types is frequently used. For example, the task of Tajikistan's water utilization system rehabilitation (which represents a well-defined goal) corresponds to the linear strategy. But this correspondence only exists in the relationship between the initial stage (task setting) and the final stage (goal). All the intermediate stages should be made more specific. In this situation, only the first stage is initially clear, i.e. the need for asset inventory and their restoration cost evaluation. But this is already an element of an adaptive strategy. However, both at this given stage, and at all the subsequent value determination-related stages, the need may arise to reassess the capabilities and, accordingly, the tasks (this is typical of a cyclic strategy). As for the investments required to implement the strategy, today they can be raised either by combining the funds taken from different sources (a branched strategy), or by attracting external, previously unknown investors (a random search strategy). It is quite clear that to implement such a strategy, its constant adjustment and updating could be required during the whole process. The same concerns other tasks as well. For example, it is hardly possible that even such a "simple" task as water resource monitoring arrangement (as far as quantities and qualities of these resources are concerned) could be entirely solved based on a linear strategy alone. In reality, there are some nuances requiring wider approaches. They could involve such issues as investments, instrumentation, specification of the required number of checkpoints, sample volumes, analyses, result interpretation and distribution, etc. Hence, it appears that in such a complex undertaking, real success in achieving the goals can only be possible if the strategy is constantly managed and controlled through the arrangement of some kind of a self-organizing process and systems approach. Therefore in practice, strategy development cannot be separated from strategy implementation since it is a coherent process. This especially concerns such a complex strategy as national economic development.

Unfortunately, the above approach shows that Tajikistan's development strategy ultimately represents not even a simplified linear strategy, but an administrative-command plan. However, no one can guarantee that it will be implemented. As an example, we have used the economic development strategy adopted by the Tajikistan government in 2002 (see Table 7).

Table 7

Economic Development Parameters

Parameters	Measurement units	2000	2005	2010	2015
GDP	million somoni	1,806.8	4,360	8,219	14,552
Agricultural products	million somoni	693.2	1,744	2,368	2,871
Industrial products	million somoni	1,374.4	4,050	7,565.6	11,281.3
including power industry	million somoni	98.9	486.8	1,088.1	1,815.1
Domestic investments	million somoni	83	380.5	1,952.2	2,454.4
Foreign investments	million USD	20.1	322	1,156.5	1,170

Source: Medium-term Program for Social and Economic Development of Tajikistan for the Period until 2015.

Such a state of affairs with elaboration and implementation of development strategies is actually observed today in all the national economy branches. Each department tends to develop only one type of strategy—a linear strategy which, in fact, is merely degenerating into an unsubstantiated plan. Such strategies can be called "desire strategies." In fact, they are based on desired requirements only, and not at all on real financial and resource potential. The financial element of such strategies is also presented in the form of investment requirements. And the lack of own resources is compensated by foreign investments (the sources of such investments are unknown). Naturally enough, such an approach does not charge strategy developers with performance commitments. Besides, there is no responsibility either: the projected plans are never fulfilled due to the lack of foreign investments.

It is practically impossible to update such formal, scientifically unsubstantiated plans on time and ensure their adaptation to the constantly changing conditions. Therefore, they are not even monitored. In the course of time, they are rescheduled, but the result is the same. An example of such an approach is Tajikistan coal sector development strategies adopted by the government over the past few years (see Table 8).

Table 8

Tajikistan's Coal Sector Development Strategies

Coal production, *thou tons*	1990	1996	2001	2004	2010	2015
1997 program			1,140	1,335	1,925	
In fact	433.2	7.48	25.8	92.2		
2002 Conception				300	500	800

Source: Approved Resolutions of Tajikistan Government.

This table shows that (in spite of the fact that the coal sector's extensive development program adopted in 1997 was fulfilled by less than by 7% by 2004) the Conception approved in 2002 did in fact provide for some unsubstantiated growth. Naturally enough, it is not being implemented.

With such an approach to development strategies, the priorities are defined automatically—based on the total amount of products manufactured by the industry branches. Therefore, priority ranking has little to do with economic efficiency. Another disadvantage of this approach is that all the industrial sectors, irrespective of their efficiency, should be developed in parallel. And not only are none of them excluded from the general development program, they are not even transferred to a later term.

The republic's environment preservation strategy could serve as a typical example here. In spite of the fact that this strategy has always been insignificantly influenced by economic activity, and after the crisis of the 1990s it became almost imperceptible (see Table 9), the state budget still provides for special resources and a number of specific measures aimed at reducing the load on the environment from economic activity, including measures on decreasing greenhouse gas emissions.

This state of affairs still exists, despite the fact that the entire world experience has been demonstrating a completely different approach. Raising the question of launching an environmental program or a strategy, let alone its implementation, depends on many factors, first of all on the level of the country's economic, industrial, and social development. This level determines both the degree (vol-

Table 9

Summary Direct Greenhouse Gas Emissions
(*Gg CO_2 equivalent*)

Greenhouse gases	CO_2 equivalent	1990	1991	1992	1993	1994	1995	1996	1997	1998
Carbon dioxide	1.0	21,942	24,877	18,923	13,238	6,449	4,089	3,073	3,128	1,736
Methane	21	273	273	315	42	21	0	0	0	0
Nitrogen monoxide	310	12.4	9.3	12.4	6.2	3.1	3.1	3.1	3.1	3.1
Total*		22,227.4	25,159.3	19,250.4	13,286.2	6,473.1	4,092.1	3,749.1	2,036.1	2,290.3

* Total: for 1999—1,843.8; for 2000—2,036.1; for 2001—2,290.3.

Source: *Tajikistan. Greenhouse Gas Inventory Summary,* United Nations Development Program, Dushanbe, 2001.

ume) of technological environmental impact, particularly the pollution of nature, and economic (and material) opportunities for respective nature protection measures aimed at its reduction or elimination, which is expressly shown by the experience of many Western countries. For example, the U.S. initially essentially ruined its unique Great Lakes; and only later, after raising its economy and ensuring high living standards for the population, did it launch specific measures aimed at their rehabilitation. Some time ago, a similar situation developed in European countries as well. During the period of their economic and industrial development, one of the main waterways of the Continent—the river Rhine—turned into a runoff ditch. Its purification process started only after these states had achieved a rather high economic level. Nowadays, all the developing states, including Tajikistan, are inevitably facing the same problem: insufficient funds to simultaneously maintain economic development and preserve the environment. The only thing they can do under present conditions is to try and attract funds from the entire world community for these purposes. Primarily funds from the most advanced states.

Now let us consider another priority of Tajikistan's economic development—the hydropower industry. In the course of elaborating the country's economic development strategy, the approach to this sector is actually the same as for agriculture and the water utilization system. The hydropower industry was chosen as a priority based on the same principle: by taking into account the gross output volume. However, the economic aspect of the problem has never been analyzed as well, i.e. its losses for agriculture and its profits for the hydropower industry. And they can be rather significant. Tajikistan possesses huge hydropower resources[3]—their potential reserves are estimated at 527 billion kWh, with its own needs (even in the long-term perspective) being no more than 30 billion kWh. And the hydropower industry remains an environmentally pure and extremely effective source of energy from the economic point of view.[4]

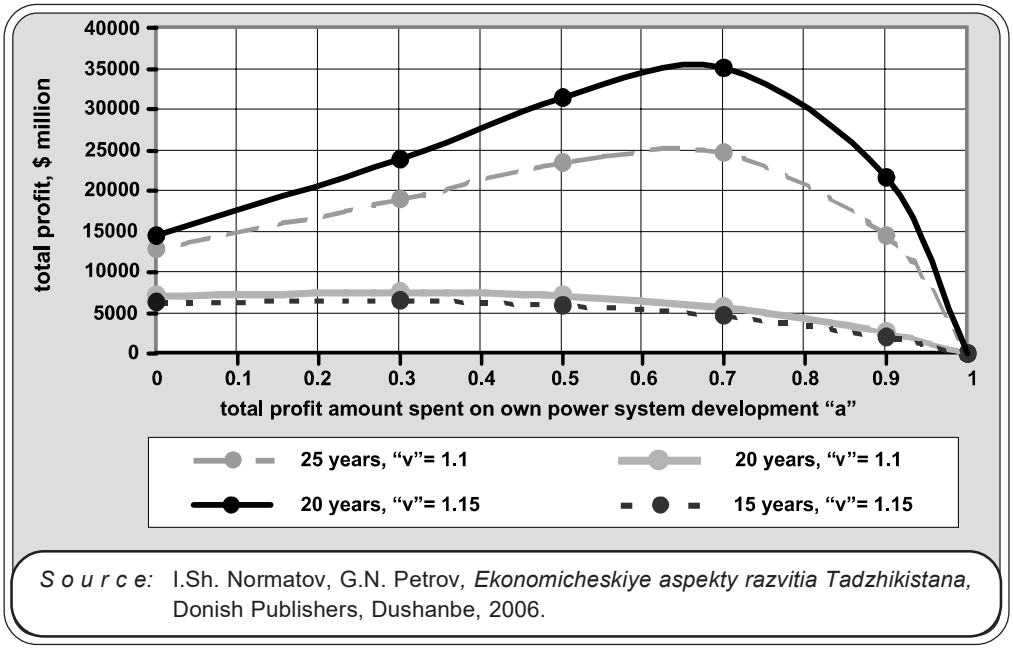
[3] See G. Petrov, "Tajikistan's Energy Projects: Past, Present, and Future," *Central Asia and the Caucasus*, No. 5 (29), 2004.

[4] See G. Petrov, "Tajikistan's Hydropower Resources," *Central Asia and the Caucasus*, No. 3 (21), 2003.

Figure 1 below shows calculations of the total profit the state could receive by developing its hydropower industry assets.

Figure 1

Total Profit of the State for a Different Number of Years, at Different Annual Tariff Growth Rates "v"



Source: I.Sh. Normatov, G.N. Petrov, *Ekonomicheskiye aspekty razvitia Tadzhikistana,* Donish Publishers, Dushanbe, 2006.

This figure shows that by developing its hydropower industry, Tajikistan will not only be able to provide itself and other countries of the region with electric power, but it will also gain profits—about $1 billion per annum. And apart from agricultural development, which—due to scarce water demand growth—could constrain the republic's relations with neighboring states, hydropower industry enhancement (by building new water basins) will contribute to solving the irrigation-related problems in the entire region. Therefore, the following unequivocal conclusion can be drawn: at this point, only by expanding its hydropower industry will Tajikistan be able to boost its economy and develop the country in general.

Unfortunately, with such opportunities available, Tajikistan is classified today among the poorest countries of the world. For many years Tajikistan has occupied 103rd÷107th place (out of 174) in the human development index. One of the main reasons is the country's poorly chosen economic development strategy. Tajikistan's example shows that irrespective of the good opportunities existing in the country, an erroneous economic development strategy could not only slow, but also halt the country's development for many years ahead.