


Advantages of using solar energy in private households
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The article describes causes and possibilities of using solar energy by private households. In particular, electricity costs in different countries and bad consequences of using electricity stations hydrocarbon power plants. Moreover, here are described some modern trends in alternative energy and modern approach to economy that is becoming relevant nowadays.

Keywords: alternative energy, solar energy, clean energy, perspective sector of economy, sharing economy

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THE ROLE OF GOVERNMENTS IN ALLOCATING WATER
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In contemporary world, there are strong trends towards of public ownership for as surface water as groundwater. Therefore, the right to use water, i.e. water allocation, is in the competency of national governments. It is the national governments’ competency to control and regulate water use. National governments quite often delegate the authority for water allocation to the state, provincial, local levels of government. As cumulative use of water resources reaches maximum, and competition for water begins with high possibility of conflict among water users, governments should set up rules and regulations for allocating water, for example, issuing water entitlements.

Keywords: water allocation, government policy, capacity

In many countries, water is publicly owned, and the national governments play the role of public guardian for water. In many countries, landowners are allowed to own groundwater under their land. At the same time, it should be noted that there are strong trends towards of public ownership for as surface water as groundwater. Therefore, the right to use water, i.e. water allocation, is in the competency of national governments. It is the national governments’
should set up rules and regulations for allocating water, for example, issuing water entitlements. In «Tragedy of Commons» (1968), Hardin G. writes that tragedy of commons happens when a common resource (for example, water) is depleted by users behaving according to their self-interest, although, all of them understand that depleting resource (water) is not to their long-term interest. Hardin’s work is well-known among scientists, conservationists, political leaders.

To prevent tragedy of commons in water sphere, government or community should control water use. Government regulations or community forums are necessary to guide water allocation process. But in fact, just a few countries, states or local communities have implemented adequate regulations and controls in situations when unsustainable water use takes place. For example, in the case of groundwater use, in many countries there are no effective regulations, which leads to over-extraction of water. Mexico’s extraction and consumption of groundwater exceeds natural recharge by 20 %, China’s — by 25 %, India’s — by 56 %. In some territories of China, the level of groundwater has fallen 50 meters in the past 50 years, and continues to fall 5 meters each year. According to some estimates, the US has drained its aquifers by amount of two Lake Eries.

The tragedies of commons in water sphere happen around the Earth nowadays not because of lack of rules and regulations, but rather because of ineffective or inadequate implementation of existing rules and regulations.

Approaches to allocating water

Governments employ different rules for water use. In some countries, a government asserts that each of its citizens has a right to sufficient water to meet the basic needs for drinking, cooking, and washing, i.e. in this case citizens have intrinsic right to use water. On the other hand, the existence of intrinsic right to water does not mean that every person has adequate access to clean water. In fact, 800 million people on the planet still do not have access to clean water. Even when governments committed to providing water to all citizens, they do not have enough means to do it.

In contemporary world, many governments recognize communal or traditional processes for allocating water by adopting customary or tribal laws.

This community-based law is mostly unwritten and informal, but it guides the behavior of millions of water users in the world. «Anchored in the wisdom of time and place, these community-based laws have proven to be quite robust and durable, and most importantly, they reflect the local cultures and belief systems of community members» (Richter, 2014, p.60–61).

In some countries, the right to use water in connected with the ownership of land. Under a riparian right, water entitlement (water entitlements grant the right to use water) is given landowners located along beaches of water body. In regions experiencing water scarcity, the most common process of allocating water is an administrative one: some governmental unit (ex., a water agency) is given the authority to issue water entitlement. Unfortunately, the existence of laws and rules has not prevented the depletion of Earth’s water sources. The rules have been ineffective for some reasons.

Financial Capacity

Insufficient funds are the most pervasive problem for governments. Money is needed to maintain existing infrastructure and build new infrastructure, to pay workers’ salaries, to conduct scientific research, and so on. If the government is not generating enough revenue from taxes and other sources, or if the government is not allocating enough funds for water governance, water allocation and management systems are likely to fail.

The United States operate the most sophisticated system of water management in the world. But there are some trends that call for worry. These trends are the results of inadequate resource allocation. One of them relates to the fact that urban water system is not maintained properly. Many pipes, water treatment facilities, reservoirs were built more than 100 years ago. That infrastructure now is in urgent need to be repaired or replaced. According to Richter (2013), it will cost nearly $384 billion over the next twenty years.

Another disturbing trend in the US is the loss of river monitoring stations. Since 1980, more than 2300 river gauges have been closed because of insufficient funding (Richter, 2013).

Water infrastructure is deteriorating not only because of the fault of national or regional governments, but also because of not proper strategy of local water agencies. Local water agencies have not adequately planned budgets for necessary maintenance of infrastructure. Many people rightly believe that water is a basic human need. Therefore, water should be distributed free of charge. But, on the other hand, it makes politically difficult for water managers to generate enough revenues from water sales to maintain water systems in good condition. Definitely, water costs should be subsidized for poor people, but those with enough income should understand that payment for water is required to maintain water facilities.

Water Expertise

Another problem is a lack of expertise to manage water sphere well. To manage existing water infrastructure (water reservoirs, water distribution systems, facilities for cleaning, recycling, desalting water), engineers and hydrologists are needed. These professionals are also needed to design new infrastructure. To keep track of water availability and use, technical experts are needed. To solve financial issues, such as to set water prices, send out water bills, control budget, financial managers and accountants are needed. To design the proper ecological functioning of fresh-water eco-systems, environmental scientists are needed. To help facilitate discussions and negotiations among water users and government agencies, social
scientists are needed. To set rules for water governance, lawyers and policy-makers are needed. The well-functioning water agencies in the world have all of this expertise, employ hundreds of staff members and operate large budgets. But having such capacity is rather exception than the rule, unfortunately.


REFERENCES:
