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## MEDICINE AND PHARMACY

### Some modern ecological problems and their possible solving ways

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**Abstract.** The article is dedicated to discussing the modern ecological problems representing actual branch of modern Science various branches – Biology, Ecology, Valeology, Physiology, Medicine, Chemistry, Engineering, Architecture in part and attracting the attention of the specialists in various countries and continents while acquiring the global character and sometimes urgent in their essentiality to be solved. In part the authors emphasize to possibility of waste materials usage in Civil Engineering due to which both the wastes are consumed and processed and building constructions acquire new useful features.

**Keywords:** *Biology, Ecology, Valeology, Physiology, Medicine, Chemistry, Engineering, Architecture, human typologies, typological aspects, temperament, Persian medicine, Mizaj, wastes, waste materials.*

Ecological problems and their solution multi-facetated study represents actual branch of modern Science various branches – Biology, Ecology, Valeology, Physiology, Medicine, Chemistry, Engineering, Architecture in part. They attract attention of the specialists in various countries and continents while acquiring the global character and sometimes urgent in their essentiality to be solved. India does not represent an exception. It is known that Egypt, India, China, Iran, the USA are characteristic with huge population as a whole and in their capitals in part. Cairo belongs to the biggest megapolis in the world, Tehran places the 24<sup>th</sup> position in this list as the example. There is even a strategy to shorten children birth in some countries while limiting the

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families with two children or even one child particularly in China. Moslemic countries forbid abortions, Christianic customs don't allow pregnancy interrupting too. There exist countries with very big families because of many children in part in Africa, Mexico. Unfortunately life level is not often good there and the inhabitants don't have modern conveniences that can lead to pollution into the environment with diseases following development. One should remember about urban, semi-urban and non-urban or rural areas. The areas every types can have common and their own ecological and technological problems. Ecological problems rather significant percentage' depends directly on human activity and are anthropogenic by their nature. Animals create ecological problems rather seldom.

Important ethnic typological aspect together with urbanization impact is expressed in the circumstance that Eastern people respect and love Nature more than the Western ones do. Ancient Great Philosophist and Doctor Hippocrate proposed humans' and animals' classification of temperaments based on dominant liquid in the human bodies - sanguine or blood (sanguinic), chole or bile (choleric), mucus or phlegm (phlegmatic) as well as black bile or chole, melan chole (melancholic). These temperaments are characteristic for the animals in part dogs. Hippocrate emphasized on essentiality to take the patients' mental state into consideration, individual approach to every sick as well as necessity to take the substances circulation in nature into obligatory account and avoid destroying them. He told that mentioned liquids dys-balance in the organism as well as the one of substances and energy between organism and external environment can result into the diseases. Gastric and hepatic temperaments, relations between body fluids or humors and hypercholesterolemia were introduced in Medicine by Great Avicenna (Ibn Sina) [1], there exists differentiation of stomach dys-temperaments [2]. The Persians created a theory about Mizaj (temperament in Farsi), have special assessment self-report scale [3], used and use other classification approaches and application areas of the data on it. Persian Medicine is characterized by wide usage of the data about Mizaj. Persian doctors consider gastro-intestinal problems as the dominating in the clinical medicine nowadays and dependent greatly on Mizaj; they propose improving the life style on the base of Mizaj while following proper eating time, the food taken quantity, the food type, chewing enough in time

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(physiologists give normal ranges for chewing or mastication in the limits of 23–27 seconds), proper interval between eating and physical loadings, avoiding the eating process under the non-appropriate psychological condition, negative emotions, the one of disease, they found water drinking time as an important and contributive into good health parameter as well [4]; temperament for melatonin was proposed by Iranian scientists and is thought to be very actual in Persian Sleep Medicine [5]. Another Persian classification of temperament is based on wetness [6]. Iranian medical psychologists used temperament of their children's patients and their parents to predict and to prove various addictions when they are adolescents (temperament studying together with ethno-gender-age aspect); psychologists assess so-called parenting styles of the parents' interaction with their children [7]; temperament is assessed to predict emotional disorders in the Iranian patients [8]; obstetricians-gynecologists paid an attention to interrelations between maternal confidence, after-labored depression and infant temperament [9]. Iranian women with warm temperament suffered from depressions after labors less than the females with the cold one [10]; theory about cold and warm temperament can be thought as actual in Sport Medicine in Iran in adolescents and adults (ethno-age and ethno-gender aspects typological aspect) [11; 12]. One can differentiate disease temperament in Persian Medicine [13], the medicines' temperament [14]; many diseases belong to dys-temperamental in Unani medicine [15]. There was a research concerning to dys-temperaments on Mizaj and diseases appearance in Bangalore [16]. Important role belongs to the researches about dys-temperaments and the diseases prevention in part in Iran [17].

Thus, we see temperamental typological belonging impact on preventing and treating the diseases due to substances imbalance as one of the reasons and temperament usage both separately and together with other typological aspects (ethno-gender, ethno-age, ethno-gender-age), in Iran – not only concerning to the topic studied.

There is an equilibrium law disordered in a modern society: human being takes "the good" from the Nature, consumed it much but returned "the bad" or returned much less than he took.

If to take into account that we are not alone in the Universe, that there are other planets, stars, Galaxies with alive creatures in part possessing consciousness, Space



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Higher Consciousness sent and sends much signals to humanity and other creatures to stop technogenic and ecological catastrophies. Even wars, disasters can be seen as Higher Consciousness' punishment for dys-balance between "the good" and "the bad" to the side of the "bad" increase and "the good" decrease. Unfortunately humanity became less kind, less careful about Nature particularly and the Earth – our home – as a whole.

Life appeared in water. During mezozoic era alive organisms left water for land, their names were psylophites for the ancient plants. Many waste products pollute oceans and seas, in part, oil and its derivatives, leading to very big problems to the seas and oceans inhabitants and humans as well. Waste products can pass to the fish while defining further eating by humans with poisoning and diseases.

Waste products exit into the air resulted into thermal effect, global increase in temperature and therefore – climate significant changing that certainly impact on substances circulation and decomposition. People inspire many harmful gases and other waste products in part in very big cities, in megapolises like Cairo, Delhi, Pekin, Tehran, American cities and others asthma became among world health problems (ethnic and ethno-age typological aspects) [18; 19; 20; 21]; professional asthma was described (there can be contact with harmful substances). This situation was hardened by COVID-19 respiratory form [22]. Traffic in megapolises releases many harmful substances which damage nature and cause respiratory problems in people and animals. It is known that green plants can absorb carbonic dioxide and desorb oxygen as photosynthesis result. That is why greenization must be among state programs in part in big cities.

People should stop following harmful habit of smoking or at least diminish it. Smoking represents world problem as well resulting into bronchial asthma greatly, thromboses while enforcing the platelet aggregation, hypertension – while narrowing vessels. But in this article we pay attention that smokers release many harmful substances into the external environment while smoking that leads even to tumors formation, progression, malignization and metastases development due to oncogenes action in part benzpyrenes. Also it should be mentioned that smoking can be active – to the smoker – during which only 5% of harmful substances get consumed; and passive – 95% of all harmful compounds are consumed by people especially those who are located nearby during smoking. Of

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courses, filters usage is actual in a given aspect though the perfect ones are absent. Eastern doctors propose rather effective method of leaving smoking. If a smoker is left-handed he or someone nearby should press on his/her left palm in its center till unpleasant pain reaction appearance when he/she wants to smoke. If to repeat many times with a Belief in God, himself/herself and reaching the positive result – this bad habit can be in the past. If a smoker is right-handed, this should be performed on his/her right palm. Tactile sensitivity expresses asymmetry dependently on the person dominant extremity: it is bigger in the left-handers on the left and in the right-handers on the right while pain sensitivity, on the contrary, will be expressed more not on dominant extremity but on the subdominant one.

There can be soil, food, water and air pollution with the waste products. If there is a deficiency of iodum resulting into hypothyreosis or thyroid gland decreased function there will be fluorum increase in soil and water replacing iodum from them leading to fluorosis in part of enamel (with brown spots on it), erythropoiesis inhibiting and erythrocytes number lowering. Why can it happen in nature? Because F and I belong to one group in Mendeleev's table of chemical elements – the 6th one. Person can not impact on this process under these conditions, he must remember that fluorum destructs enamel hydroxyapatites and its complex with Ca and F becomes impossible. F- containing tooth pastes must not be applied in endemic regions on hypothyreosis for example in Poltava region in Ukraine as well as this country western regions.

Mercury can cause problems in fish while accumulating after accidents of ships. There can be its spots with sea animals further problems to swim and even to inspire when they raise from the depth to the water surface. If a person eats such polluted fish or if he is working at the plant of gas-discharging lamps where mercury is applied there can be mercurialism: micro – expressed in grey gums, macro – in hands' and even arms' shaking, brain epi-activity when seizures are not developed but there are changes in electroencephalography rhythms characteristic for epilepsy as well as epilepsy itself if a patient has work stage in 15–20 years.

One must remember about substances circulation in nature and our duty to save it under physiological ranges because it will impact on further generations' health in a wide aspect.

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Human ecology maintaining was put as one of the main, global tasks essential for humanity to be performed by WHO – world health organization. Specialists from other branches of Science in part engineers can and must contribute in waste products safe processing.

Engineers search for the waste materials proper utilization pathways and found them as bitumen partial replacer encouraging to its bigger strength and plasticity (we mean the plastic waste materials) that is very important during roads building [23; 24]; rubber materials are used as aggregates [25]. It is very important because plastic represents substance without biological degrading or decomposition id est with bacteria that can lead to their passage into soil and air after their decomposition; such waste materials not only improved the bitumen's properties but the ones of bituminous mix applied at pavement building [26]. Plastic roads are considered to be pure ecologically [27]. We give the examples of waste materials usage proposed by Indian engineers.

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