
Climate Change and Anthropological Change: Social Teaching of the Church on Ecology Issues

Klimata izmaiņas un antropoloģiskās izmaiņas: Baznīcas sociālā mācība par ekoloģijas jautājumiem

Dace Dolace, Mag. theol. (Latvia)

The article is focusing on climate change as an important element of ecological crisis and outlines the integrative (scientific, social, ecclesial) approach to the climate change problems and strategies of normalizing ecological situation. The aim of the article is to point out the significance of the factor of social consciousness (or anthropological dimension) in the complex developing of sustainable and ecologically balanced society. In the context of the international and local climate change policy the position and role of the social teaching of traditional Church (Orthodox and Catholic) have been viewed. The article traces the Orthodox theological concept of interconnection between ecological crisis and anthropological processes, proponing a human person (*anthropos*) as a central symbol of climate change.

Keywords: climate change, anthropogenic factor, Catholic social teaching; ecological concept of the Orthodox Church, experiential ethics, civic society

1. Climate change as an integral part of ecological crisis – description of the situation

Modern society is suffering a multi-faceted crisis generated by the contemporary civilization. Ecological problems form an integral part of the crisis – the ecological balance has been violated and society is facing the emergence of destructive processes in nature, including the failure of its natural reproductive power. The Earth climate has changed. The global average surface temperature has increased over the last century, and further climate change would be beyond the adaptive capacity of many societies and species.

What is climate change?

Scientific approach

Climate is a statistical description of weather conditions and their variations, including both averages and extremes. Climate change is a change in the average pattern of weather over a long period of time.¹ Greenhouse gases play an important role in determining climate and causing climate change.

Climate change is one of the nine ecologically affected planetary systems (next to – biodiversity loss, nitrogen and phosphorus cycles, stratospheric ozone depletion, ocean acidification, global freshwater use, land use, atmospheric aerosol loading, chemical pollution).

Coherent scientific research and recent measurements (published in 2009 by J. Rockström and colleagues²) have identified and qualified **planetary boundaries that must not be transgressed**; – crossing certain biophysical thresholds could have disastrous consequences for humanity. Table 1 show that three of nine interlinked planetary boundaries have already been overstepped.

Table 1

Planetary boundaries

<i>Earth system process</i>	<i>Parameters</i>	<i>Proposed boundary</i>	<i>Current status</i>	<i>Pre-industry value</i>
Climate change	(I) Atmospheric carbon dioxide concentration (parts per mill.by volume) (II) Change in radiative forcing (watts per metre squared)	350 1	387 1.5	280 0
Rate of biodiversity loss	Extinction rate (number of species per million species per year)	10	>100	0.1-1
Nitrogen cycle (part of a boundary with the phosphorus cycle)	Amount of N ₂ removed from the atmosphere for human use (millions of tonnes per year)	35	121	0
Phosphorus cycle (part of a boundary with the nitrogen cycle)	Quantity of P flowing into the oceans (millions of tonnes per year)	11	8.5-9.5	-1
Stratospheric ozone depletion	Concentration of ozone (Dobson unit)	276	283	290
Ocean acidification	Global mean saturation state of aragonite in surface sea water	2.75	2.90	3.44
Global freshwater use	Consumption of freshwater by humans (km ³) per year	4.000	2.600	415
Change in land use	Percentage of global land cover converted to cropland	15	11.7	Low
Atmospheric aerosol loading	Overall particulate concentration in the atmosphere, on a regional basis	To be determined		
Chemical pollution	For example, amount emitted to, or concentration of persistent organic pollutants, plastics, endocrine disrupters, heavy metals and nuclear waste in, the global environment, or the effects on ecosystem and functioning of Earth system thereof	To be determined		
Boundaries for processes colored in grey have been crossed .				

Data sources: Rockström J., et al. (see reference³)

Facts on the evident nature of climate change show: during the last century the average air temperature has increased by $0.7 \pm 0.2^{\circ}\text{C}$ around the world. And it continues to increase. Scientists forecast that by 2100 it could increase by $1.4\text{--}5.8^{\circ}\text{C}$, but in Europe – by $2\text{--}5.5^{\circ}\text{C}$.

Anthropogenic causes of climate change

As one of the main causes of climate change, a dramatic increase in GHG (greenhouse gases) emissions over the last century has been identified. In nature, the so called *natural* greenhouse gases (carbon dioxide or CO_2 , methane or CH_4 , nitrous oxide or N_2O) can be found, but there are also such **greenhouse gases** (in addition to the above mentioned – sulphur hexafluoride or SF_6 , hydrofluorocarbons or HFCs and perfluorocarbons or PFCs) that are produced as a **result of human economic activities (anthropogenic)** in the transport sector, industrial manufacturing, intensive agriculture, waste management, as well as by burning anthracite and oil products for energy production. Studies on climate change have proved that **anthropogenic GHG emissions are the ones that increase the climate change caused by earth warming the most.**

Carbon dioxide is the most important anthropogenic greenhouse gas. Statistical data show that during the period 1970-2004 emissions of CO_2 have increased by approximately 80%⁴ due to intensive use of fossil fuel – oil, anthracite and natural gas, and rapid deforestation.

This increase of greenhouse gas concentration occurred since the beginning of the Industrial Revolution, when the global human population began growing rapidly.

Impacts of climate change on society and environment

Along with the increase in temperature glaciers will melt faster, the level of water in world oceans will rise more rapidly, also the number and scale of extreme and uncharacteristic natural phenomena (e.g., storms, floods, spells of great heat or coldness, long drought, etc.) will increase, thus having significant deteriorating effects on nature, the man-made environment, national economy, human health and safety. Moreover, these are only the direct effects of climate change which in their turn slow down (or promote) the development of national economy and welfare. It should be noted that also the effects of climate change on agriculture, fishing, energy sector, biological diversity (eco-systems), soil degradation, profusion or scarcity of water, human health, and consumption models should be discussed.

Scientists of the Baltic Sea Region suggest that the most profound direct effects of climate change on this region are the following: sea level rise which in its turn increases the risk of floods; warmer and shorter winters affected by the increase in global average temperature; more frequent and heavier storms with increased wind velocity, thus incurring losses in populated areas, as well as increasing the risk of sea floods and coastal erosion; changes in the distribution of rainfall, including increase of strong rainstorms and the total annual rainfall, decrease of rainfall in summers, but – increase in winters, changes in the water supply, as well as river, lake floods and general increase of the water level in rivers. In its turn, severe drought and strong winds significantly increase the forests' reaction to fire and the possibility of forest fires. Thus, the artificially restored forest plantations suffer from extreme natural conditions.

According to the data presented in the National Environmental policy⁵ the amount of economic losses in Latvia resulting from climate change is distinctively reflected by the compensations for losses caused by agro-climatic conditions: in 2004 – LVL 221 908, but in 2005 – LVL 440 652 (one third of which were compensations for livestock fallen due to midge bites, but two thirds – for covering material damages caused by floods). In January 2005, the storm which hit not only Latvia, but the whole Northern Europe incurred heavy damages – in Latvia, the estimated total damages amounted to approximately EUR 192 million (the European Union Solidarity Fund allocated EUR 9.487 million).

However, apart from the negative effects of climate change, there are also positive effects to be certainly mentioned. For example, in some places, the agricultural sector will benefit due to longer growing seasons, but elsewhere farming will be more risky because of the scarcity of water and severe (and difficult to predict) weather conditions. Some benefits are possible also in the energy sector due to such direct effects of climate change as the increase in air temperature, growth in the average water flow caused by the increase in rainfall, etc. It would contribute to reduction in consumption of energy resources for heating (which could be even more promoted by energy efficiency measures), as well as more intensive power generation in hydroelectric plants. The positive effects are related also to effects of temperature changes on the biosphere: increase in temperature will reduce possibility of frost and significantly prolong the growing season, but due to a milder climate in the winter months, the human mortality caused by cold will decrease in the temperate zone.

Interdisciplinary approach to the climate change research and management

Human alteration of Earth is substantial and growing. Scientific approach to climate change advances **a concept of human domination of Earth's ecosystems**.⁶ Therefore P. Vitousek *et. al.* proposes long-range and perspective approach to the ecological research – analysis of ecological processes incorporating the so called ‘human factor’:

“The challenge of understanding a human-dominated planet further requires that the human dimensions of global change – the social, economic, cultural, and other drivers of human actions – be included within our analyses.”⁷

This approach will have twofold effect:

1) embedding natural sciences (*int.al.* the science of climate) in the space of interdisciplinary research, liberating the interpretation of ecological phenomena from unilateral discourse of natural sciences;

2) recognition that decisions on how to **respond to climate change will have to be made by the society as a whole**. The ecological crisis management “needs to consider the findings of climate change together with considerations that go beyond the science and must include, amongst others, ethics and equity, economics, culture (*int.al.* religion), risk management and politics.”⁸

Multi-faceted nature of climate change is characterized by theologian and environmental scientist D. Hallman: on the one hand, “climate change is an illustration of the complex relationship between science and economics”; on the other hand, “climate change is a metaphor of the fractured relationship between human societies and God’s creation.”⁹

2. International and local climate change policy

Two essential components (strategies) of the climate change policy has been marked in arena of global climate change policy:

- 1) **mitigation** of climate change,
- 2) **adaptation** to unavoidable climate change.

The First World Climate Conference was held in February 1979 in Geneva and identified climate change as a topical and global issue, and invited governments of all countries to start implementing practical measures to improve the situation.

In 1988, the UN General Assembly passed its first Resolution 43/53 on climate change, and the World Meteorological Organization together with the UN Environment Programme established the **Intergovernmental Panel on Climate Change (IPCC)**, so that it would examine the range of climate change, estimate the effects and develop potential strategies. In 1990, the Panel published its first assessment report on climate change.

In 1992, the Convention on Biological Diversity was signed together with the United Nations Framework Convention on Climate Change (UNFCCC) during the **UN Conference on Environment and Development in Rio de Janeiro**, Brazil, **thus highlighting that a new phase of assessing human values and responsibility has started in the global political life.**¹⁰ The objective of this Convention is stabilization of greenhouse gas concentrations in the atmosphere at such a level that would prevent dangerous anthropogenic interference with the climate system. Moreover, such level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change and to ensure organic food production and enable the economic development to proceed in a sustainable manner. An important requirement stipulated in the Convention is that the parties or Member States have a right to, and should, promote sustainable development.

Currently, the UN Framework Convention on Climate Change has 192 Member States or parties. In order to prevent anthropogenic effect of greenhouse gas emissions on the climate Latvia signed the UN Framework Convention on Climate Change in 1992, and the Latvian Parliament (the Saeima) ratified it on 23 February 1995.

On 11 December 1997, in the city of Kyoto, Japan, the Convention was supplemented with **the Kyoto Protocol** (entering into effect on 16 February 2005).¹¹ Latvia ratified the Kyoto Protocol on 5 July 2002. Currently, 175 countries (36 of which are industrialized countries or economies in transition) have ratified the Kyoto Protocol. The Kyoto Protocol stipulates that from 2008 to 2012 the industrialized countries shall individually or jointly ensure that their aggregate anthropogenic (deriving from human activities) emissions of greenhouse gases (further – GHG) do not exceed their assigned amounts calculated pursuant to their quantified emission limitation and reduction commitments referred to in the Annex B. According to the EU point of view, Latvia has to reduce the total GHG emissions by 8% in comparison to 1990.¹²

The **UN Climate Change Conference held in Nairobi in 2006** finalized a five-year Work Programme on Impacts, Vulnerability and Adaptation to Climate Change. The above mentioned programme in order to mitigate climate change a greater focus puts on the sectors of economy causing the highest GHG emissions: energy (including transport), industry, solvent and other product use, land use (including agriculture and forestry) and waste management. Promotion of development and use of **low carbon technologies** plays an essential role.

European Union climate change policy

On 17 December 2008 the European Parliament adopted the climate and energy package defining EU climate change and energy policies up to 2020. The adopted legislation includes a directive on improving the functioning of the European Union's (EU) emissions trading scheme, decision on commitments of Member States to limit emissions of greenhouse gases not covered by the emissions trading scheme (hereinafter – the ETS) (including sectors of transport, agriculture, waste management), directive on the geological storage of carbon dioxide, as well as a directive on promotion of the use of renewable energy sources.

The main objective of the directive on promotion of the use of renewable energy sources is to ensure that by 2020 the percentage of **renewable energy sources**¹³ in the EU reaches 20% of the gross final energy consumption. The Member States will have to draft action plans for use of renewable energy sources in accordance with specific requirements. In 2005, the share of renewable energy sources consumed in Latvia was 32,6%, but in 2020 it should reach 40%.

It is planned by 2020 to reduce greenhouse gas emissions by 10% in the non-ETS sectors compared to the level of 2005. For Latvia the increase in greenhouse gas emissions cannot exceed 17% by 2020 compared to 2005, which will be a challenge, since emissions from the non-ETS sectors account for more than 2/3 of overall emissions of the country, and the largest emission growth is forecasted in the transport sector.

On 29 June 2007 the European Commission published **the first EU-level political declaration on the necessity to adapt to climate change – the EU Green Paper on “Adapting to climate change in Europe – options for EU action”**. It highlights that adaptation policies and instruments have to be selected from the existing ones, particularly by developing crisis and risk management, promoting adaptation measures at all levels (national, regional and local), integrating policies and their implementation instruments into main sectors of national economy. The European Commission has published the **“White Paper: Adapting to Climate Change”** on 2 April 2009. It envisages that development and introduction of the adaptation policy shall be carried out in two phases: during the first phase (2009-2012) a comprehensive EU adaptation strategy is to be developed, but during the second phase it will be implemented (after 2012).

Situation in Latvia: defining the problems

The GHG emission projections show that by implementing the current policy on mitigation of climate change Latvia will fulfill its emission reduction commitments defined in the Kyoto Protocol for 2008-2012.

In Latvia, regarding the development of national economy, human welfare and stability of eco-systems, on 5 August 2008 the Cabinet of Ministers adopted an informative report “On Adapting to Climate Change” being prepared on the basis of the EU Green Paper on Adapting to Climate Change and White Paper on Adapting to Climate Change), as well as by taking into account studies by foreign and local scientists and other facts about the increasingly important effects caused by climate change.

Ministry of Environment of Latvia has brought forward the main objective of climate change policy¹⁴:

to provide contribution of Latvia to prevention of global climate change by **ensuring balance between environmental and economic interests**.

Planned measures for achievement of the policy objective:

1. To coordinate measures in order to ensure harmonized **reduction of GHG emissions** and increase of CO₂ capture;
2. To draft and introduce a **legislative framework** for operation of the national GHG emission scheme,
3. **To encourage change of the consumption model according to the sustainable development approach;**
4. To facilitate renovation of **multi-apartment buildings** according to the energy audit results;
5. To encourage development and introduction of efficient and environmentally friendly **technologies** to increase energy efficiency and the **use of renewable energy sources**;
6. To improve **the tax system** with a view to reduce the use of fossil fuels and increase use of renewable energy sources;
7. To support efficient and **rational use of energy**;
8. To promote **scientific studies** on mitigation of climate change and adaptation to it;
9. To ensure communication for informing all groups of society about climate change and for **increasing public participation**, to **encourage initiative at local level**;
10. To provide the **public with high-quality information on the necessity to reduce the effects of harmful climate change** and about implementation of planned national measures [emphasis mine – D.D.].

Specified tasks explicitly points at integrative character of the climate change management in the country; but there is a lack of adequate approach. **In order to achieve the aim of balancing environmental and economic development anthropological, societal, cultural factors and change strategies (proposed by science!) should not be dismissed.**

In order to come to essential solutions of the climate change crisis, which have been defined as anthropogenic crisis, it is not sufficiently “to provide the public with high-quality information on the necessity to reduce the effects of harmful climate change” and “to inform all groups of society for increasing public participation”. These activities are incapable to **reach the anthropological core of the “ecological and economical balance” problem**.

Strategic document of Latvian Environmental policy¹⁵ analyzing the results of the period since 2006 identifies following key problems regarding climate change policy:

1. Lack of long-term, regular scientific studies on the potential impact of climate change on the environment of Latvia;
2. Economic and social adaptation measures and their implementation programme have not been developed;
3. The rate of using technologies that reduce greenhouse gas emissions (including technologies using renewable energy sources and increasing energy efficiency) is low;
4. Lack of a climate policy aimed at households;

5. The public and companies do not have a strong desire to change their consumption model [emphasis mine – D.D.].

Problems of economic and social adaptation to the climate change can never be solved merely by economical and political instruments. Strategically essential question and methodological problem remains in agenda:

if the ecological crisis is the result of formation of the consumer society in the epoch of industrialization, how could be changed the consumption models of society? (E.g., environmental studies of social demands prognoses a further intensive growth of the personal transport use and its influence on climate change.¹⁶⁾

The aim of this article is to point out the significance of the factor of social consciousness (or anthropological dimension) in the complex developing of sustainable and ecologically balanced society.

In this context the social concept of the Church obtains peculiar topicality.

3. Catholic social teaching and environmental ethics

Catholic social teaching (CST) strategically approved by the Vatican Council II (1960) has traditionally focused on economic and social development, encompassing issues related to human work, the economy, peace, human rights, the family and national and international political development. At the time of Vatican II ‘green movements’ were sporadic. Now, in the early years of the 21st century, ecological concerns are at the forefront.

John Paul’s II World Day of Peace message, ‘Peace with God the Creator, Peace with all of Creation (1990),¹⁷ was the first comprehensive Papal document dedicated solely to ecology and has been widely influential. John Paul II states that “the proper ecological balance will not be found without directly addressing the structural forms of poverty that exist throughout the world.” He stresses “**the urgent need for a new solidarity**”

In a 2003 ecology statement, the Canadian Bishops amplify this papal concern by stating that “ecological harmony cannot exist in a world of unjust social structures; nor can the extreme social inequalities of our current world order result in ecological sustainability.”¹⁸ In other words, economy and ecology (and culture) must be addressed in a seamless, holistic fashion in a manner that is ultimately rooted in the incarnate Jesus Christ.

A rich tradition of Episcopal teaching on ecology and human development has developed over the past three decades. In response to pressing socioecological issues, individual bishops or national conferences of bishops have issued pastoral letters on ecology and development.¹⁹

Current principles of ecological teaching on global climate change

Catholic Church qualifies the ecological crisis as a “social and personal problem”, related to the sphere of **ethics**.²⁰

Respect for the integrity of creation is one of the basic theological postulates regarding to ecology. Catholic Catechism posits (Section 2415):

“The seventh commandment [thou shalt not steal] enjoins respect for the **integrity of creation**. Animals, like plants and inanimate beings, are by nature destined for

the **common good** of past, present, and future humanity. Use of the mineral, vegetable, and animal resources of the universe cannot be divorced from **respect for moral imperatives**. **Man's dominion** over inanimate and other living beings granted by the Creator is not absolute; it is limited by **concern for the quality of life of his neighbor**, including generations to come; it requires a religious respect for the integrity of creation [emphasis mine – D.D.].

In this text from Catechism appear the main categories on which is based the Catholic social teaching on ecology.

Summarizing – the following environmental principles constitute contemporary Catholic social teaching on the environment and climate change particularly:

1. **Scientific Knowledge and the Virtue of Prudence.** Accepting the consensus findings of scientists on ‘global warming’ Church realizes that interpretation of scientific data and conclusions in public discussion can be difficult and contentious matters. Over the past few decades, the evidence of global climate change and the emerging scientific consensus about the human impact on this process have led many governments to reach the conclusion that they need to invest time, money, and political will to address the problem through collective international action. The virtue of prudence is paramount in addressing climate change. This virtue is not only a necessary one for individuals in leading morally good lives, but is also vital to the moral health of the larger community. “**Prudence is intelligence applied to human actions. It allows discerning what constitutes the common good in a given situation.** Prudence requires a deliberate and reflective process that aids in the shaping of the community’s conscience.”²¹
2. **Human life and dignity as a forefront of any consideration of environmental questions.** Pope John Paul II has linked protecting the environment to “authentic human ecology,” which can overcome “structures of sin” and which promotes both human dignity and respect for creation.²²
3. **The obligations to future generations as a necessary condition of environmental decision-making.** As Pope John Paul II has said, “We cannot interfere in one area of the ecosystem without paying due attention both to the consequences of such interference in other areas and to the well being of future generations.”²³ Responses to global climate change should reflect human interdependence and common responsibility for the future of the planet. Individual nations must measure their own self-interest against the greater common good and contribute equitably to global solutions.
4. **The universal common good.** The right to private property and the mandate to use property for the common good must both be respected in environmental policies.
5. **Stewardship as an appropriate model for human care for the environment.** Stewardship – defined in this case as the ability to exercise moral responsibility to care for the environment – requires freedom to act. Significant aspects of this stewardship include the right to private initiative, the ownership of property,²⁴ and the exercise of responsible freedom in the economic sector. Stewardship requires a careful protection of the environment and calls to use human intelligence “to discover the earth’s productive potential and the many different ways in which human needs can be

satisfied.”²⁵ Technological innovation and entrepreneurship can help make possible options that can lead society to a more environmentally benign energy path. Changes in lifestyle based on traditional moral virtues can ease the way to a sustainable and equitable world economy in which sacrifice will no longer be an unpopular concept.

6. **Spirit of subsidiarity – environmental decision-making made at the appropriate level.**
7. **Caring for the poor and issues of equity.**
8. **Environmental concerns are also moral concerns which require radical rethinking of the consumer culture of our society.**

Catholic Church is characterized by active social response to the challenges of ecological crisis. Catholic social teaching represents mainly the **ethical streamline of crisis management and mitigation.**

4. Anthropological approach to the ecological concept of the Orthodox Church

What regards the Christian ecological strategy and its basic questions on care for creation Traditional Church (Orthodox and Catholic Churches) it is united lying on the substructure of God’s Revelation and shared Tradition of the Church.

As evidence serves the common **declaration *On the Environment* signed by Pope John Paul II and Patriarch Bartholomew I of Constantinople in 10 June, 2002.**²⁶ Declaration reasserts the central position of human beings in the whole of creation, and accordingly – the human responsibility in front of Creator and society.

Peculiar topicality of this declaration is **call for repentance** of human sins against nature. (Stress on repentance – individual and social – is an approach specifically characteristic to the Orthodox spirituality):

“What is required is an act of repentance on our part and a renewed attempt to view ourselves, one another, and the world around us within the perspective of the divine design for creation. The problem is not simply economic and technological; it is moral and spiritual. A solution at the economic and technological level can be found only if we undergo, in the most radical way, an inner change of heart, which can lead to a change in lifestyle and of unsustainable patterns of consumption and production.”

Founder of the Orthodox ecological concept in Russia, Vladimir Solovyev, a century ago has proposed the correlation between society and ecology: **environmental changes are dependant of social and anthropological changes.**²⁷ Nowadays this approach has become extremely substantial; this conceptual line has been kept in the social concept of the Russian Orthodox Church.

Basic ecological principles of the Social Concept of the Orthodox Church²⁸

1. Relations between man and nature were broken in pre-historic times because of the fall of man and his alienation from God.

The first human transgression was reflected in nature like in a mirror. The seed of sin, having produced an effect in the human heart, gave rise to “thorns and thistles”, as Holy Scripture testifies (Gen. 3:18). The full organic unity that existed between man

and the world around him before the fall (Gen. 2: 19-20) was made impossible. In their now consumer relations with nature, human beings began to be more often guided by egoistic motives. They began to forget that the only Lord of the Universe is God (Ps. 23:1), to Whom belong “the heaven... and the earth also, with all that therein is (Deut. 10:14), while man, as St. John Chrysostom put it, is only a “**housekeeper**”²⁹ entrusted with the riches of the earth. “Dominion” over nature and “subjection” of the earth (Gen. 1:28), to which man is called, do not mean all-permissiveness in God’s design. It only means that man is the bearer of the image of the heavenly Housekeeper and as such should express, according to St. Gregory of Nyssa, his royal dignity not in dominion over the world around him or violence towards it, but in “dressing” and “keeping” the magnificent kingdom of nature for which he is responsible before God.

2. The Orthodox Church appreciates the efforts for overcoming the ecological crisis and **calls people to intensive co-operation** in actions aimed to protect God’s creation. At the same time, she notes that these efforts will be more fruitful if the basis on which man’s relations with nature are built will be not purely humanistic but also Christian. One of the main principles of the Church’s stand on ecological issues is the unity and integrity of the world created by God. **Orthodoxy does not view nature around us as an isolated and self-closed structure.** The plant, animal and human worlds are interconnected. From the Christian point of view, nature is not a repository of resources intended for egoistic and irresponsible consumption, **but a house**³⁰ in which man is not the master, but the housekeeper, and a temple in which he is the priest serving not nature, but the one Creator. The conception of nature as temple is based on the idea of theocentrism: God Who gives to all “life, and breath, and all things” (Acts 17:25) is the Source of being. Therefore, life itself in its various manifestations is sacred, being a gift of God. Any encroachment on it is a challenge not only to God’s creation, but also to the Lord Himself.

3. The ecological problems are essentially anthropological as they are generated by man, not nature. Therefore, answers to many questions raised by the environmental crisis are to be found in the human heart, not in the spheres of economy, biology, technology or politics. Nature is transformed or dies not by itself, but under the impact of man. His spiritual condition plays the decisive role here, for it affects the environment both with and without such an impact. The church history knows of many examples when the love of Christian ascetics for nature, their prayer for the world around them, their compassion for all creatures made a beneficial impact on living things.

4. Relationships between anthropology and ecology are revealed with utter clarity in our days when the world is experiencing two concurrent crises: spiritual and ecological. In contemporary society, man often loses the awareness of life as a gift of God and sometimes the very meaning of life, reducing it sometimes to the physical being alone. With this attitude to life, nature around him is no longer perceived as home and all the more so as temple, becoming only a “habitat”. The spiritually degrading personality leads nature to degradation as well, for it is unable to make a transforming impact on the world. The colossal technological resources cannot help humanity blinded by sin, for, being indifferent to the meaning, mystery and wonder of life, they cannot be really beneficial and sometimes become even detrimental. In a spiritually disorientated man, the technological power would beget utopic reliance on the boundless resources of the human mind and the power of progress.

5. It is impossible to overcome the ecological crisis in the situation of a spiritual crisis. This does not at all mean that the Church calls to curtail the preservation activity, but in her hope for a positive change in the man-nature relationships, she relies rather on society's aspiration for spiritual revival. The anthropogenic background of ecological problems shows that we tend to change the world around us in accordance with our own inner world; therefore, the transformation of nature should begin with the transformation of the soul. According to St. Maximus the Confessor, man can turn the earth into paradise only if he carried paradise in himself.

5. Problem of ethical (moral) demands and proclamation in modern society

Regarding the environmental policy of the Traditional Church there should not be ignored following problem which become essential in the process of implementation of the ethical and anthropological strategies.

Church should be very conscious of moral discourse changes in up-to-date social consciousness. **In the context of crisis of classical European ethics, classical proclamation of moral norms and principles (characteristic to the traditional European Christianity for centuries) has become ineffective.** Tracing the decline process of the classical moral consciousness (*int.al.* ecological consciousness) of society, theologians and philosophers³¹ have outlined several phases:

1. Rejection of platonic (and later patristic) ontology or *kosmos noetos*. This stage has been basically completed to the end of the 19th c. with the loss of consciousness of sacred unity of humans, nature and God. To this time the noticeable presence of platonizing and patristic metaphysics in European thought was probably restricted to Russian Orthodox theology and religious philosophy.
2. Rejection of the Cartesian epistemological subject – the famous “death of subject” widely discussed at the beginning of 20th century.
3. Rejection of Kantian ethical subject. This “death of ethical subject” is a result of the Second World War and the experience of the nazist and soviet totalitarianism, which was quite correctly interpreted as a total bankruptcy of classical ethics.

Therefore classical propositional formulas of Christian ethics couldn't be practically caught and personified by modern society, even by Christian communities. But, searching for possibilities of regaining public authority Church should not fall in another extreme – loosing the Truth in efforts of improving social, ecological, political, etc. situation.

Describing this problem of moral “efficacy” Orthodox philosopher Christos Yannaras analyzes the specific character of Orthodox ethos which is imbedded into Eucharistic community and Truth. There is a distinction between Truth-based moral position and between “ethics of improvement” peculiar to a large part of Western Christianity. The expectations of direct improvement of outer situation are based on two premises³² which are taken as self-evident: 1) one such premise is that organized effort, where individuals enlist in struggles against other individuals or structures which maintain social injustice, is capable of bearing fruit and restoring the life of society as a whole to its correct functioning. 2) The other premise is the conviction that correct or adequate functioning of life in society as a whole can be secured by an objective, rationalistic control of the individual's rights and duties.

On the other hand, Truth of the Church is still a teaching with the power to transfigure the world. The problem arises when “objectification of Truth”³³ comes about. The historical and cultural life of the West has been built identifying the truth with a particular function of human logic. “Objective” truth presupposes rationality as the only possible way of interpreting and ordering natural and societal reality. **Truth is no longer something achieved by a personal approach and personal experience, by anthropological transformation in the process of striving for the Truth, but a complete, closed system of concepts.** When Truth becomes “objective,” this leads to the “infallibility” of its representatives, of the bureaucratic structures.

The social and environmental ethics of the Church aims neither at an “improvement” in the objective conditions of corporate life, nor at an “improvement” in the character of other individuals. Its aim is “to enable life to operate in the limitless scope personal freedom, **the freedom which can be existentially realized only as an event of communion or ‘communal becoming’**” (Yannaras). The Church’s communion is an ontological fact, – being is an event of communion; it is divine, Trinitarian communion.

Also in Russian Orthodox theology we can find similar theological position – S. Horujy proposes topicality of ‘**experiential ethics**’ today opposed to any abstract ethics.³⁴ This type of *ethos* stems from Orthodox patristic and monastic ethical tradition which is based two factors: 1) divine and human love and 2) personal communion. This does not make ethics a doctrine; it is rather like a live instruction or counseling. Contrary to other frequent accusations of ascetic ethics, it is not egoistic or purely individualistic. **The God-man connection, being personal, includes at the same time rich inter-subjective aspects. These inter-subjective or “councilary” (Rus. ‘soborny’) aspects shapes appropriate methodology of developing solidarity, associations and communities** – links of life and ethically-based relations which penetrates and heals the canvas of social, political and ecological life.

At the starting point the Ethical Space, i.e., the sphere of validity of ethical judgments, coincides here with the Space of the personal experience of love and *praxis* of *caritas*. This personal ethical space is, of course, much smaller than whole Human Space (space of human and social being), which serves as Ethical Space for classical European ethics. But the experiential Ethical Space is also expanding keeping always its personalistic and cohesive nature.

6. Church’s social and ecological approach in the interdisciplinary context

Orthodox vision of anthropological and experientially ethical change of social (and ecological) canvas is in accord both with the position of natural sciences (which have declared the anthropogenic factor as determinant of the negative climate change as well as of the positive changes), and latest approaches to the global crisis by progressive thinkers of social, political and economical sciences.

In searching for revitalization and reintegration of society new – associative, solitaire – social, economical and cultural paradigm is being evolved. It includes:

1. **principles of associative democracy.** The central idea is – “how to get more co-operation, co-ordination and collaboration into our economy, our democracy, our public services, and our lives.”³⁵ Similar ideas have appeared in society in different contexts (*inter alia* in Church context): considering

the potential and implications of increased social cohesion, mutuality; the need to pay more attention to relationship in life; to overcome individualism and social isolationism, etc. The basic question which has been raised is how to develop

- more associational forms of democracy,
 - wider decision-making,
 - to re-balance the centralization of the state and the dominance of big business.
2. developing the **social entrepreneurship** – kind of entrepreneurship which goal is bringing social merit and development of the moral and social capacity for the people involved instead of financial goal and profit as primary
 3. development of the **civic society**. Politics in the nation-state era operates along two structural poles of society: market and government. Europe Union politics operates between three structural components: market, government and civic society. The shift from two-sector to three sector politics represents a radical progression in the development of political life. World-famous economist J. Rifkin calls the civic society ‘the forgotten sector’ which after a long period of being colonized at the hands of the market and nation state is pushing to re-establish its central role in the scheme of public life.³⁶ Civic society is composed of all the activities that make up the cultural life of individuals and their communities – the civic society includes religious organizations, the arts, health care, social and **environmental advocacy**.³⁷

Today local neighborhoods and communities (human unions – *oikos* where personal experiential ethics of *caritas*, based on Liturgical and Eucharistic ethos of the Church, could be implemented) would be ideal social agents to address the abundance of issues that confront humanity in an interconnected world.

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- 30 *Oikos* (Gr.) – ‘house; home’. It is worth to remind that notion ‘**ecology**’ stems from **Greek word** *oikos*, primarily understood as ‘God’s house or dwelling place; God’s people; family’ – semantically the relationship is stressed instead of the physical building.

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Klimata izmaiņas un antropoloģiskās izmaiņas: Baznīcas sociālā mācība par ekoloģijas jautājumiem

Kopsavilkums

Raksts iztirzā klimata pārmaiņas kā ekoloģiskās krīzes būtisku sastāvdaļu un iezīmē integratīvo(zinātnisko, sociālo, ekleziālo) pieejuklimata pārmaiņu problemātikai un ekoloģiskās situācijas normalizācijas stratēģijām. Raksta mērķis ir iezīmēt sociālās apziņas (jeb antropoloģiskās dimensijas) faktora nozīmību ilgtspējīgas un ekoloģiskā līdzsvarā atrodošas sabiedrības kompleksajā attīstībā. Rakstā aplūkota tradicionālo kristīgo Baznīcu (pareizticīgo un katoļu) sociālās mācības loma un vieta starptautisko un vietējo klimata pārmaiņu politikas kontekstā. Raksts aplūko pareizticīgo teoloģisko konceptu savstarpējai saistībai starp ekoloģisko krīzi un antropoloģiskajiem procesiem, izvirzot cilvēka personu (antropos) kā centrālo klimata pārmaiņu simbolu.

Atslēgas vārdi: klimata pārmaiņas, antropogēnais faktors, katoļu sociālā mācība, Pareizticīgās Baznīcas ekoloģiskais koncepts, uz pieredzi pamatoa ētika, pilsoniskā sabiedrība



Mag. theol., assist. prof. Dace Dolace

Assistant professor at Latvian Christian Academy,
Latvian Social Dialogue Education Centre

Address: 5. Ilinja 3, Jūrmala, LV-2010, Latvia

Phone: +371 67753360; +371 29407580 (cell ph.)

E-mail: teologija@kra.lv

APPENDIX / PIELIKUMS

APPENDIX 1 / PIELIKUMS Nr. 1

Rio Declaration on Environment and Development

The United Nations Conference on Environment and Development,

Having met at **Rio de Janeiro from 3 to 14 June 1992**,

Reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June 1972, and seeking to build upon it,

With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people,

Working towards international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system,

Recognizing the integral and interdependent nature of the Earth, our home,

Proclaims that:

Principle 1

Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

Principle 2

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 3

The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

Principle 4

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 5

All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

Principle 6

The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

Principle 7

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit to sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

Principle 8

To achieve sustainable development and a higher quality of life for all people, States should

reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Principle 9

States should cooperate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

Principle 10

Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 11

States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

Principle 12

States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.

Principle 13

States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

Principle 14

States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.

Principle 15

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Principle 16

National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

Principle 17

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 18

States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States. Every effort shall be made by the international community to help States so afflicted.

Principle 19

States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.

Principle 20

Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

Principle 21

The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all.

Principle 22

Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Principle 23

The environment and natural resources of people under oppression, domination and occupation shall be protected.

Principle 24

Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

Principle 25

Peace, development and environmental protection are interdependent and indivisible.

Principle 26

States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.

Principle 27

States and people shall cooperate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development.

Source: Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972 (United Nations publication, Sales No. E.73.II.A.14 and corrigendum), chap. I. Available: <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=78&ArticleID=1163>

APPENDIX 2 / PIELIKUMS Nr. 2

PEACE WITH GOD THE CREATOR, PEACE WITH ALL OF CREATION

Message of **Blessed John Paul II** for the celebration of the WORLD DAY OF PEACE,

January 1, 1990

INTRODUCTION

1. IN OUR DAY, there is a growing awareness that world peace is threatened not only by the arms race, regional conflicts and continued injustices among peoples and nations, but also by a lack of DUE RESPECT FOR NATURE, by the plundering of natural resources and by a progressive decline in the quality of life. The sense of precariousness and insecurity that such a situation engenders is a seedbed for collective selfishness, disregard for others and dishonesty. Faced with the widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past. The public in general as well as political leaders are concerned about this problem, and experts from a wide range of disciplines are studying its causes. Moreover, a new ECOLOGICAL AWARENESS is beginning to emerge which, rather than being downplayed, ought to be encouraged to develop into concrete programs and initiatives.

2. Many ethical values, fundamental to the development of a PEACEFUL SOCIETY, are particularly relevant to the ecological question. The fact that many challenges facing the world today are interdependent confirms the need for carefully coordinated solutions based on a morally coherent world view. For Christians, such a world view is grounded in religious convictions drawn from Revelation. That is why I should like to begin this Message with a reflection on the biblical account of creation. I would hope that even those who do not share these same beliefs will find in these pages a common ground for reflection and action.

I. "AND GOD SAW THAT IT WAS GOOD"

3. In the Book of Genesis, where we find God's first self-revelation to humanity (Gen. 1-3), there is a recurring refrain: "AND GOD SAW IT WAS GOOD". After creating the heavens, the sea, the earth and all it contains, God created man and woman. At this point the refrain changes markedly: "And God saw everything he had made, and behold, IT WAS VERY GOOD" (Gen. 1:31). God entrusted the whole of creation to the man and woman, and only then – as we read – could he rest "from all his work" (Gen. 2:3). Adam and Eve's call to share in the unfolding of God's plan of creation brought into play those abilities and gifts which distinguish the human being from all other creatures. At the same time, their call established a fixed relationship between mankind and the rest of creation. Made in the image and likeness of God, Adam and Eve were to have exercised their dominion over the earth (Gen. 1:28) with wisdom and love. Instead, they destroyed the existing harmony BY DELIBERATELY GOING AGAINST THE CREATOR'S PLAN, that is, by choosing to sin. This resulted not only in man's alienation from himself, in death and fratricide, but also in the earth's "rebellion" against him (cf. Gen. 3: 17-19; 4:12). All of creation became subject to futility, waiting in a mysterious way to be set free and to obtain a glorious liberty together with all the children of God (cf. Rom 8:20-21).

4. Christians believe that the Death and Resurrection of Christ accomplished the work of reconciling humanity to the Father, who "was pleased [...] through (Christ) to reconcile to himself ALL THINGS, whether on earth or in heaven, making peace by the blood of his cross" (Col. 1: 19-20). Creation was thus made new (cf. Rev. 21:5). Once subjected to the bondage of sin and decay (cf. Rom. 8:21), it has now received new life while "we wait for new heavens and a new earth in which righteousness dwells" (2 Pet. 3:13). Thus, the Father "has made known to us in all wisdom and insight the mystery [...] which he set forth in Christ as a plan for the fullness of time, to unite ALL THINGS in him, all things in heaven and things on earth" (Eph. 1: 9-10).

5. These biblical considerations help us to understand better THE RELATIONSHIP BETWEEN HUMAN ACTIVITY AND THE WHOLE OF CREATION. When man turns his back on the Creator's plan, he provokes a disorder which has inevitable repercussions on

the rest of the created order. If man is not at peace with God, then earth itself cannot be at peace: "Therefore the land mourns and all who dwell in it languish, and also the beasts of the field and the birds of the air and even the fish of the sea are taken away" (Hos. 4:3). The profound sense that the earth is "suffering" is also shared by those who do not profess our faith in God. Indeed, the increasing devastation of the world of nature is apparent to all. It results from the behavior of people who show a callous disregard for the hidden, yet perceivable requirements of the order and harmony which govern nature itself.

People are asking anxiously if it is still possible to remedy the damage which has been done. Clearly, an adequate solution cannot be found merely in a better management or a more rational use of the earth's resources, as important as these may be. Rather, we must go to the source of the problem and face in its entirety that profound moral crisis OF WHICH THE DESTRUCTION OF THE ENVIRONMENT IS ONLY ONE TROUBLING ASPECT.

II. THE ECOLOGICAL CRISIS: A MORAL PROBLEM

6. Certain elements of today's ecological crisis reveal its moral character. First among these is the INDISCRIMINATE APPLICATION of advances in science and technology. Many recent discoveries have brought undeniable benefits to humanity. Indeed, they demonstrate the nobility of the human vocation to participate RESPONSIBLY in God's creative action in the world. Unfortunately, it is now clear that the application of these discoveries in the fields of industry and agriculture have produced harmful long-term effects. This has led to the painful realization that WE CANNOT INTERFERE IN ONE AREA OF THE ECOSYSTEM WITHOUT PAYING DUE ATTENTION BOTH TO THE CONSEQUENCES OF SUCH INTERFERENCE IN OTHER AREAS AND TO THE WELL-BEING OF FUTURE GENERATIONS. The gradual depletion of the ozone layer and the related "greenhouse effect" has now reached crisis proportions as a consequence of industrial growth, massive urban concentrations and vastly increased energy needs. Industrial waste, the burning of fossil fuels, unrestricted deforestation, the use of certain types of herbicides, coolants and propellants; all of these are known to harm the atmosphere and environment. The resulting meteorological and atmospheric changes range from damage to health to the possible future submersion of low-lying lands. While in some cases the damage already done may well be irreversible, in many other cases it can still be halted. It is necessary, however, that the entire human community – individuals, States and international bodies – take seriously the responsibility that is theirs.

7. The most profound and serious indication of the moral implications underlying the ecological problem is the lack of RESPECT FOR LIFE evident in many patterns of environmental pollution. Often, the interests of production prevail over concern for the dignity of workers, while economic interests take priority over the good of individuals and even entire peoples. In these cases, pollution or environmental destruction is the result of an unnatural and reductionist vision which at times leads to a genuine contempt for man.

On another level, delicate ecological balances are upset by the uncontrolled destruction of animal and plant life or by a reckless exploitation of natural resources. It should be pointed out that all of this, even if carried out in the name of progress and well-being is ultimately to mankind's disadvantage. Finally, we can only look with deep concern at the enormous possibilities of biological research. We are not yet in a position to assess the biological disturbance that could result from indiscriminate genetic manipulation and from the unscrupulous development of new forms of plant and animal life, to say nothing of unacceptable experimentation regarding the origins of human life itself. It is evident to all that in any area as delicate as this, indifference to fundamental ethical norms, or their rejection, would lead mankind to the very threshold of self-destruction. RESPECT FOR LIFE, AND ABOVE ALL FOR THE DIGNITY OF THE HUMAN PERSON, IS THE ULTIMATE GUIDING NORM FOR ANY SOUND ECONOMIC, INDUSTRIAL OR SCIENTIFIC PROGRESS. The complexity of the ecological question is evident to all. There are, however, certain underlying principles, which, while respecting the legitimate autonomy and the specific competence of those involved, can direct research towards adequate and lasting solutions. These principles are essential to the building of a peaceful society; no peaceful society can afford to neglect either respect for life or the fact that there is an integrity to creation.

III. IN SEARCH OF A SOLUTION

8. Theology, philosophy, and science all speak of a harmonious universe, of a “cosmos” endowed with its own integrity, its own internal, dynamic balance. THIS ORDER MUST BE RESPECTED. The human race is called to explore this order, to examine it with due care and to make use of it while safeguarding its integrity. On the other hand, the earth is ultimately A COMMON HERITAGE, THE FRUITS OF WHICH ARE FOR THE BENEFIT OF ALL. In the words of the Second Vatican Council, “God destined the earth and all it contains for the use of every individual and all peoples” (Gaudium et Spes, 69). This has direct consequences for the problem at hand. It is manifestly unjust that a privileged few should continue to accumulate excess goods, squandering available resources, while masses of people are living in conditions of misery at the very lowest level of subsistence. Today, the dramatic threat of ecological breakdown is teaching us the extent to which greed and selfishness – both individual and collective – are contrary to the order of creation, an order which is characterized by mutual interdependence.

9. The concepts of an ordered universe and a common heritage both point to the necessity of a MORE INTERNATIONALLY COORDINATED APPROACH TO THE MANAGEMENT OF THE EARTH'S GOODS. In many cases the effects of ecological problems transcend the borders of individual States; hence their solution cannot be found solely on the national level. Recently there have been some promising steps towards such international action, yet the existing mechanisms and bodies are clearly not adequate for the development of a comprehensive plan of action. Political obstacles, forms of exaggerated nationalism and economic interests – to mention only a few factors – impede international cooperation and long-term effective action. The need for joint action on the international level DOES NOT LESSEN THE RESPONSIBILITY OF EACH INDIVIDUAL STATE. Not only should each State join with others in implementing internationally accepted standards, but it should also make or facilitate necessary socio-economic adjustments within its own borders, giving special attention to the most vulnerable sectors of society. The State should also actively endeavor within its own territory to prevent destruction of the atmosphere and biosphere, by carefully monitoring, among other things, the impact of new technological or scientific advances. The State also has the responsibility of ensuring that its citizens are not exposed to dangerous pollutants or toxic wastes. THE RIGHT TO A SAFE ENVIRONMENT is ever more insistently presented today as a right that must be included in an updated Charter of Human Rights.

IV. THE URGENT NEED FOR A NEW SOLIDARITY

10. The ecological crisis reveals the URGENT MORAL NEED FOR A NEW SOLIDARITY, especially in relations between the developing nations and those that are highly industrialized. States must increasingly share responsibility, in complimentary ways, for the promotion of a natural and social environment that is both peaceful and healthy.

The newly industrialized States cannot, for example, be asked to apply restrictive environmental standards to their emerging industries unless the industrialized States first apply them within their own boundaries. At the same time, countries in the process of industrialization are not morally free to repeat the errors made in the past by others, and recklessly continue to damage the environment through industrial pollutants, radical deforestation, or unlimited exploitation of non-renewable resources. In this context, there is urgent need to find a solution to the treatment and disposal of toxic wastes.

No plan or organization, however, will be able to effect the necessary changes unless world leaders are truly convinced of the absolute need for this new solidarity, which is demanded of them by the ecological crisis and which is essential for peace. THIS NEED PRESENTS NEW OPPORTUNITIES FOR STRENGTHENING COOPERATIVE AND PEACEFUL RELATIONS AMONG STATES.

11. It must also be said that the proper ecological balance will not be found without DIRECTLY ADDRESSING THE STRUCTURAL FORMS OF POVERTY that exist throughout the world. Rural poverty and unjust land distribution in many countries, for example, have led to subsistence farming and to the exhaustion of the soil. Once their land yields no more, many farmers move on to clear new land, thus accelerating uncontrolled deforestation, or

they settle in urban centers which lack the infrastructure to receive them. Likewise, some heavily indebted countries are destroying their natural heritage, at the price of irreparable ecological imbalances, in order to develop new products for export. In the fact of such situations it would be wrong to assign the responsibility to the poor alone for the negative environmental consequences of their actions. Rather, the poor, to whom the earth is entrusted no less than to others, must be enabled to find a way out of their poverty. This will require a courageous reform of structures, as well as new ways of relating among peoples and States.

12. But there is another dangerous menace which threatens us, namely, war. Unfortunately, modern science already has the capacity to change the environment for hostile purposes. Alterations of this kind over the long term could have unforeseeable and still more serious consequences. Despite the international agreements which prohibit chemical, bacteriological and biological warfare, the fact is that laboratory research continues to develop new offensive weapons capable of altering the balance of nature. Today, any form of war on a global scale would lead to incalculable ecological damage. But even local or regional wars, however, limited, not only destroy human life and social structures, but also damage the land, ruining crops and vegetation as well as poisoning soil and water. The survivors of war are forced to begin a new life in very difficult environmental conditions, which in turn create situations of extreme social unrest, with further negative consequences for the environment.

13. Modern society will find no solution to the ecological problem unless it TAKES A SERIOUS LOOK AT IS LIFESTYLE. In many parts of the world society is given to instant gratification and consumerism while remaining indifferent to the damage which these cause. As I have already stated, the seriousness of the ecological issue lays bare the depth of man's moral crisis. If an appreciation of the value of the human person and of human life is lacking, we will also lose interest in others and in the earth itself. Simplicity, moderation and discipline, as well as a spirit of sacrifice, must become a part of everyday life, lest all suffer the negative consequences of the careless habits of a few. AN EDUCATION IN ECOLOGICAL RESPONSIBILITY is urgent: responsibility for oneself, for others and for the earth. This education cannot be rooted in mere sentiment or empty wishes. Its purpose cannot be ideological or political. It must not be based on a rejection of the modern world or a vague desire to return to some "paradise lost". Instead, a true education in responsibility entails a genuine conversion in ways of thought and behavior. Churches and religious bodies, non-governmental and governmental organizations, indeed all members of society, have a precise role to play in such education. The first educator, however, is the family, where the child learns to respect his neighbor and to love nature.

14. FINALLY, THE AESTHETIC VALUE OF CREATION CANNOT BE OVERLOOKED. Our very contact with nature has a deep restorative power; contemplation of its magnificence imparts peace and serenity. The Bible speaks again and again of the goodness and beauty of creation, which is called to glorify God (cf. Gen. 1:4ff; Ps. 8:2; 104:1ff; Wis. 13: 3-5; Sir. 39:16, 33; 43:1, 9). More difficult perhaps, but no less profound, is the contemplation of the works of human ingenuity. Even cities can have a beauty all their own, one that ought to motivate people to care for their surroundings. Good urban planning is an important part of environmental protection, and respect for the natural contours of the land is an indispensable prerequisite for ecologically sound development. The relationship between a good aesthetic education and the maintenance of a healthy environment cannot be overlooked.

V. THE ECOLOGICAL CRISIS: A COMMON RESPONSIBILITY

15. Today the ecological crisis has assumed such proportions as to be THE RESPONSIBILITY OF EVERYONE. As I have pointed out, its various aspects demonstrate the need for concerted efforts aimed at establishing the duties and obligations that belong to individuals, peoples, States and international community. This not only goes hand in hand with efforts to build true peace, but also confirms and reinforces those efforts in a concrete way. When the ecological crisis is set within the broader context of THE SEARCH FOR PEACE within society, we can understand better the importance of giving attention to what the earth and its atmosphere are telling us: namely, that there is an order in the universe which must

be respected, and that the human person, endowed with the capability of choosing freely, has a grave responsibility to preserve this order for the well-being of future generations. I wish to repeat that THE ECOLOGICAL CRISIS IS A MORAL ISSUE. Even men and women without any particular religious conviction, but with an acute sense of their responsibilities for the common good, recognize their obligation to contribute to the restoration of a healthy environment. All the more should men and women who believe in God the Creator, and who are thus convinced that there is a well-defined unity and order in the world, feel called to address the problem. Christians, in particular, realize that their responsibility within creation and their duty towards nature and the Creator are an essential part of their faith. As a result, they are conscious of a vast field of ecumenical and interreligious cooperation opening up before them.

16. At the conclusion of this Message, I should like to address directly my brothers and sisters in the Catholic Church, in order to remind them of their serious obligation to care for all creation. The commitment of believers to a healthy environment for everyone stems directly from their belief in God the Creator, from their recognition of the effects of original and personal sin, and from the certainty of having been redeemed by Christ. Respect for life and for the dignity of the human person extends also to the rest of creation, which is called to join man in praising God (*cf. Ps. 148:96*). In 1979, I proclaimed Saint Francis of Assisi as the heavenly patron of those who promote ecology (*cf. Apostolic Letter Inter Sanctos: AAS 71* (1979), 1509f). He offers Christians an example of genuine and deep respect for the integrity of creation. As a friend of the poor who was loved by God's creatures, Saint Francis invited all of creation – animals, plants, natural forces, even Brother Sun and Sister Moon – to give honor and praise to the Lord. The poor man of Assisi gives us striking witness that when we are at peace with God we are better able to devote ourselves to building up that peace with all creation which is inseparable from peace among all peoples. It is my hope that the inspiration of Saint Francis will help us to keep ever alive a sense of "fraternity" with all those good and beautiful things which Almighty God has created. And may he remind us of our serious obligation to respect and watch over them with care, in light of that greater and higher fraternity that exists within the human family.

APPENDIX 3 / PIELIKUMS Nr. 3

Basics of the Social Concept of the Russian Orthodox Church

XIII. The Church and ecological problems

XIII. 1. The Orthodox Church, aware of her responsibility for the fate of the world, is deeply concerned for the problems generated by the contemporary civilisation. Ecological problems occupy a considerable place among them. Today the face of the Earth has been distorted on a global scale. Damaged are its bowels, soil, water, air and fauna and flora. Nature around us has been almost fully involved in the life support of man who is no longer satisfied with its diverse gifts, but exploits without restrain whole ecosystems. Human activity, which has reached the level of biospheric processes, constantly grows due to the accelerated development of science and technology. The pollution of the environment by industrial wastes everywhere, bad agricultural technology, the destruction of forests and top-soil – all result in the suppressed biological activity and the steady shrinking of the genetic diversity of life. The irreplenishable mineral resources are being exhausted; the drinking water reserves are being reduced. Great many harmful substances have appeared, not included in the circulation and accumulated in biosphere. The ecological balance has been violated; man has to face the emergence of pernicious processes in nature, including the failure of its natural reproductive power.

All this happens against the background of an unprecedented and unjustified growth of public consumption in highly developed countries, where the search for wealth and luxury has become a norm of life. This situation has obstructed the fair distribution of natural resources, which are common human property. The consequences of the ecological crisis have proved painful not only for nature, but also for man as organically integral to it. As a result, the Earth has found itself on the verge of a global ecological disaster.

XIII. 2. Relations between man and nature were broken in pre-historic times because of the fall of man and his alienation from God. Sin that was born in the soul of man damaged not only him himself, but also the entire world around him. «For the creature was made subject to vanity, not willingly, but by reason, of him who hath subjected the same in hope, because the creature itself also shall be delivered from the bondage of corruption into the glorious liberty of the children of God. For we know that the whole creation groaneth and travileth in pain together until now» (Rom. 8: 1-22). The first human crime was reflected in nature like in a mirror. The seed of sin, having produced an effect in the human heart, gave rise to «thorns and thistles», as Holy Scripture testifies (Gen. 3:18). The full organic unity that existed between man and the world around him before the fall (Gen. 2: 19-20) was made impossible. In their now consumer relations with nature, human beings began to be more often guided by egoistic motives. They began to forget that the only Lord of the Universe is God (Ps. 23:1), to Whom belong «the heaven [...] and the earth also, with all that therein is» (Deut. 10:14), while man, as St. John Chrysostom put it, is only a «housekeeper» entrusted with the riches of the earth. These riches, namely, «the air, sun, water, land, heaven, sea, light, stars», as the same saint remarks, God «divided among all in equal measure as if among brothers». «Dominion» over nature and «subjection» of the earth (Gen. 1:28), to which man is called, do not mean all-permissiveness in God's design. It only means that man is the bearer of the image of the heavenly Housekeeper and as such should express, according to St. Gregory of Nyssa, his royal dignity not in dominion over the world around him or violence towards it, but in «dressing» and «keeping» the magnificent kingdom of nature for which he is responsible before God.

XIII. 3. The ecological crisis compels us to review our relations with the environment. Today the conception of man's dominion over nature and the consumer attitude to it has been increasingly criticised. The awareness that contemporary society pays too high a price for the blessings of the civilisation has provoked opposition to economic egoism. Thus, attempts are made to identify the activities that damage the natural environment. At the same time, a system of its protection is being developed; the present economic methods are being reviewed; efforts are made to create power-saving technologies and wasteless

plants which can be fit at the same time into the natural circulation. The ecological ethics is being developed. The public consciousness guided by it speaks against the consumer way of life, demanding that the moral and legal responsibility for the damage inflicted on nature be enhanced. It also proposes to introduce ecological education and training and calls for joined efforts in protecting the environment on the basis of broad international co-operation.

XIII. 4. The Orthodox Church appreciates the efforts for overcoming the ecological crisis and calls people to intensive co-operation in actions aimed to protect God's creation. At the same time, she notes that these efforts will be more fruitful if the basis on which man's relations with nature are built will be not purely humanistic but also Christian. One of the main principles of the Church's stand on ecological issues is the unity and integrity of the world created by God. Orthodoxy does not view nature around us as an isolated and self-closed structure. The plant, animal and human worlds are interconnected. From the Christian point of view, nature is not a repository of resources intended for egoistic and irresponsible consumption, but a house in which man is not the master, but the housekeeper, and a temple in which he is the priest serving not nature, but the one Creator. The conception of nature as temple is based on the idea of theocentrism: God Who gives to all «life, and breath, and all things» (Acts 17:25) is the Source of being. Therefore, life itself in its various manifestations is sacred, being a gift of God. Any encroachment on it is a challenge not only to God's creation, but also to the Lord Himself.

XIII. 5. The ecological problems are essentially anthropological as they are generated by man, not nature. Therefore, answers to many questions raised by the environmental crisis are to be found in the human heart, not in the spheres of economy, biology, technology or politics. Nature is transformed or dies not by itself, but under the impact of man. His spiritual condition plays the decisive role here, for it affects the environment both with and without such an impact. The church history knows of many examples when the love of Christian ascetics for nature, their prayer for the world around them, their compassion for all creatures made a beneficial impact on living things.

Relationships between anthropology and ecology are revealed with utter clarity in our days when the world is experiencing two concurrent crises: spiritual and ecological. In contemporary society, man often loses the awareness of life as a gift of God and sometimes the very meaning of life, reducing it sometimes to the physical being alone. With this attitude to life, nature around him is no longer perceived as home and all the more so as temple, becoming only a «habitat». The spiritually degrading personality leads nature to degradation as well, for it is unable to make a transforming impact on the world. The colossal technological resources cannot help humanity blinded by sin, for, being indifferent to the meaning, mystery and wonder of life, they cannot be really beneficial and sometimes become even detrimental. In a spiritually disorientated man, the technological power would beget utopic reliance on the boundless resources of the human mind and the power of progress.

It is impossible to overcome the ecological crisis in the situation of a spiritual crisis. This does not at all mean that the Church calls to curtail the preservation activity, but in her hope for a positive change in the man-nature relationships, she relies rather on society's aspiration for spiritual revival. The anthropogenic background of ecological problems shows that we tend to change the world around us in accordance with our own inner world; therefore, the transformation of nature should begin with the transformation of the soul. According to St. Maxim the Confessor, man can turn the earth into paradise only if he carried paradise in himself.

Source: Basic principles of the Social Concept of the Russian Orthodox Church, XIII (2000). Russian Orthodox Church. The official webpage of the Department for external Church relations. Available: <http://www.mospat.ru/en/documents/social-concepts/>