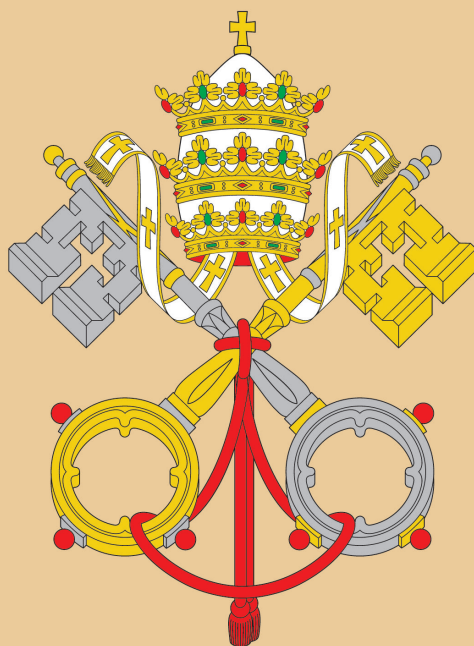


**EXPO 2017**

**ЭКСПО 2017**



**VATICAN  
HOLY SEE**

**ВАТИКАН  
СВЯТОЙ ПРЕСТОЛ**

The participation of the  
Holy See and of the Catholic Church in the  
International Exhibition EXPO 2017 Astana

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of the Catholic Church in  
the International Exhibition EXPO 2017 Astana

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February 2024



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## I. FOREWORD – CARDINAL PETER TURKSON



This book wants to celebrate what happened in Astana in occasion of the International Specialized Exhibition EXPO 2017.

During three whole months, the Pavilion of the Holy See, among numerous others, welcomed thousands of visitors at a fair which was dedicated to the inspiring and challenging general theme "Future energy". This however is only one part of the story, certainly the most visible one but nevertheless only one part. We also want to celebrate and remember all of the events organized at our Pavilion and in the city of Astana, all of the preparation process, from design to construction, from conceptualization to recruitment. We want to express gratitude to the partners, advisors, artists, workers, collaborators, sponsors and other friends who co-operated with the team of the Holy See (both in the Vatican and in Astana) to make this participation possible.

When visiting the huge spherical Pavilion of Kazakhstan, in the honorable company of Mr. Tokayev, Chairman of the Senate, I was moved when seeing pictures of John Paul II displayed on a screen. He came to Kazakhstan in

September 2001, only a few days after the shocking and well-known terrorist attack which hit the USA. He was a man of peace and encounter, coming as representative of the Catholic Church in a mainly-Muslim country, coming as a man grown in Eastern Europe in a vast and young independent nation which bridges Europe to Asia. Unsurprisingly, in what many still consider as a historical visit, the Pope underscored that, in Kazakhstan, "the world can see accord and harmony between different peoples as an eloquent sign of the vocation of all peoples to live together in peace, in mutual knowledge and openness, and an ever deeper discovery and appreciation of the distinctive traditions of each people. Kazakhstan is a land of encounter, exchange and newness" (Address during the meeting with Young people, Astana, 23 September 2001).

I felt that, during this EXPO, the host Country demonstrated once more to what extent a commitment to harmony, peace, mutual knowledge and openness is a topmost priority. As Pope Francis wrote in 2015, sadly, "we lack an awareness of our common origin, of our mutual belonging, and of a future to be shared with everyone. This basic awareness would enable the development of new convictions, attitudes and forms of life" (Encyclical letter *Laudato si'*, § 202).

By accepting the invitation of the Republic of Kazakhstan to participate in the EXPO 2017, we felt that we could become one of the contributors of the realization of another historical moment for Kazakhstan: hosting an International EXPO in a country that strives in a constructive way – in a path which is never easy or obvious – towards harmony between cultures, religions, ethnic groups.

We decided to undertake this by sharing – through our events and in our Pavilion – a narrative inspired by the teaching of the Holy Bible and of recent Popes. The title of this narrative is "Energy for the Common Good: Care for our common home". This book aims precisely at presenting this narrative and expressing deep gratitude for those who invited us to the EXPO 2017 and to all those people of good will, which made our participation possible.

We thank heartily all of you, hosts, interlocutors, collaborators, local staff, general contractor and subcontractors, partners, visitors and friends.

Cardinal Peter K.A. Turkson

Prefect of the Dicastery for Promoting Integral Human Development  
Section Commissioner for the Holy See participation in the EXPO 2017

17 November 2020

## II. WHY IS THE HOLY SEE AT EXPO?

The Catholic Church is walking together with every person "inside" the world, having the mission to bring the Gospel of Jesus and the possibility that people can encounter Him in their own life.

The Catholic Church, represented by the Holy See at the international level, will always be present where people are, with its own message.

Since Pope Pius IX, the Holy See regards international events such as Universal Exhibitions and International Exhibitions as privileged moments for reflection, discovery and dialogue with visitors and with the other official participants on major world issues. Since the Great Exhibition of 1851, the Holy See has been a regular participant in many Exhibitions. Moreover, there is a special interest from the Catholic Church for any major event related to ecology and the sustainable management of our planet and our societies, such as the event on "Future energy" that took place in Kazakhstan.

Consistent with its participation in recent EXPOS on water (Zaragoza 2008) and food (Milan 2015), the Vatican<sup>1</sup> was eager to contribute to reflections on the most urgent concern of energy, which affects all countries and the many disciplines - including education, economics, science, politics and diplomacy - that are called to "care for our common home". This phrase, taken from the title of the Encyclical Letter *Laudato si'* of Pope Francis, adorned the Vatican's pavilion, named "Energy for the Common Good: Care for our common home".

Bearing this in mind, the Vatican's pavilion set energy matters within an "integral" framework, which considered the material, social and spiritual aspects of life. The person is at the centre of the reflections of the Church. This is particularly evident when nowadays Pope Francis speaks about an "integral ecology". All the natural elements can be used in light of improving human life and of serving the common good. In this sense, energy had a broad sense for the Church and for its presence at EXPO: we all share an

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<sup>1</sup> While "Holy See" is the accurate designation, nevertheless "Vatican" is better-known and easier to recognize and therefore the concept "Vatican" has been often used to designate the Holy See in the context of the EXPO 2017.

equal human dignity; we all share the same rights – in relation to our needs – and the same duties, both to each other and to the natural world. This is why – as Pope Paul VI in his Encyclical Letter *Populorum progressio* said – “the development (...) cannot be restricted to economic growth alone. To be authentic, it must be well rounded; it must foster the development of each man and of the whole man”. Recognizing that everything is interconnected, we must all exercise our rights and fulfil our responsibilities in an integral perspective: the “development of the individual necessarily entails a joint effort for the development of the human race as a whole”.

Within this progress, Pope Francis asks, “What kind of world do we want to leave to those who come after us, to children who are now growing up?” Answering now is urgent and it is up to us.

## III. CALENDAR OF OUR ACTIVITIES

### 2016

#### 29 April

Signature of the Participation Contract by Cardinal Peter K.A. Turkson and Mr. Rapil Zhoshybayev, Commissioner of the EXPO 2017, in the office of the Pontifical Council of Justice and Peace, with the presence of staff from the Embassy of Kazakhstan to the Holy See.

#### 11 May

Cardinal Turkson, with the Archbishop of Astana, Tomasz B. Peta, and collaborators from the Pontifical Council of Justice and Peace as well as from the Apostolic Nunciature in Kazakhstan, visited the headquarter of the EXPO Company in Astana. In the following weeks, after consultation with the local Church, Father Guido Trezzani, from the diocese of Almaty, is appointed Deputy-Section Commissioner.

#### 16 November

The Theme statement of the Holy See, after due approval by the EXPO Company, is simultaneously released in the Press Room of the Holy See in the Vatican, and in the Interfax Agency of Almaty, where Cardinal Turkson, the Apostolic Nuncio Francis A. Chullikatt and the Bishops of Kazakhstan are gathered for a joint press conference.

### 2017

#### 22 and 23 February

A delegation from the Holy See takes part in the International Participant Meeting in Astana.

#### 15 March

The Holy See takes over the Pavilion from the EXPO Company. Construction will start shortly after.

#### 9 June

Cardinal Turkson and Nuncio Chullikatt take part in the opening ceremony of the EXPO 2017. Testing, recruiting and training of the Vatican Pavilion is completed.

**10 June**

Inauguration of our Pavilion: Cardinal Turkson cuts the ribbon, along with representatives of the Catholic Church in Kazakhstan, of general contractor company and subcontractors.

**22 June**

Press conference in the EXPO Media Center, presenting the pavilion and the encyclical letter *Laudato si'*.

**29 August**

Father Trezzani organizes a visit in the EXPO for a group of trisomic children.

**30 August**

Our team organizes a visit in the EXPO for a dozen of Kazakh bloggers.

**31 August**

The interreligious conference *All together for the care of our common home* takes place in the Palace of Peace and Reconciliation of Astana.

**1 September**

In front of our Pavilion, Cardinal Turkson reads the Joint message of Pope Francis and Ecumenical Patriarch Bartholomew on the occasion of the World day of prayer for Creation.

**2 September**

Press conference in the EXPO Media Center, presenting the National Day of the Holy See and our pavilion.

Official celebration of the National Day of the Holy See, with the participation of Mr. Kassym-Jomart Tokayev, Chairman of the Senate of Kazakhstan and of the choir *Soli Deo gloria* of the diocese of Novosibirsk. Archbishop Peta read the Message of Pope Francis for the EXPO 2017.

**3 September**

Conference *Energy for our common home*, in the Nazarbayev University of Astana.

**10 September**

Final day of EXPO 2017.

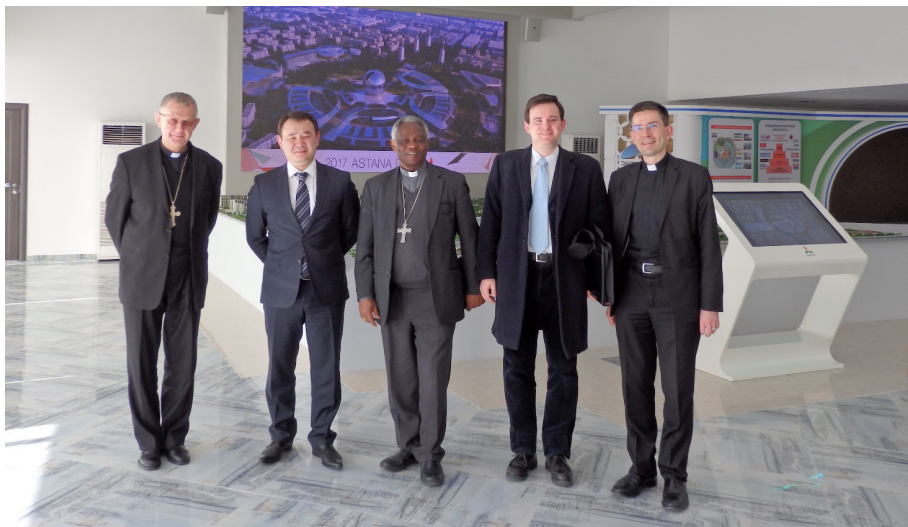


## IV. FIRST MEETINGS IN ASTANA

11 May 2016



First meeting with the local Church, in the Curia of the Archdiocese of Astana, hosted by Archbishop Peta.



Visit of the offices of the EXPO JSC Organizing company.

## V. SIGNATURE OF THE PARTICIPATION CONTRACT

29 April 2016



The Participation Contract is the formal commitment of the Holy See to participate in the incoming EXPO.

It was signed at Palazzo San Calisto, between Expo Commissioner, Rapol Žilinskas, and Cardinal Peter Turkson.

## VI. THE THEME STATEMENT OF THE HOLY SEE

The Vatican<sup>2</sup> pavilion, entitled "**Energy for the Common Good: Caring for our Common Home**", seeks to make the point: **Future Energy** is energy that serves the wellbeing of all humanity and of its world, *our common home!*

### SUMMARY

The pavilion will offer visitors the following experiential, intellectual and spiritual itinerary, providing a deeply human, ethical framework different from other pavilions.

**Step 1. Energy at the origins of man:** The cosmic display of energy and light at the origins of humans and their world was also the beginning of God's creation out of *love!*

**Step 2. Energy in the life and hands of man:** Energy meant for all, has been harnessed, distributed and employed in ambiguous ways in history and today, for good and for bad, wasted in wars and injustice by humans.

**Step 3. Making energy and its use human:** In support of *integral human development*, and *caring for our common home*, energy can be produced and put to ethical, sustainable use – and there are good examples!

**Step 4. The Energy within us:** In conclusion, energy is also within us, tapped in *awe, prayer, meditation* by people of faith for virtuous and holy living.

On the way out visitors will see that the Vatican (Holy See) is supporting a humanitarian energy project in a disaster area.

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<sup>2</sup> While "Holy See" is the accurate designation, nevertheless "Vatican" is better-known and easier to recognize and will therefore be used throughout to designate the Holy See.

## **ENERGY FOR THE COMMON GOOD: “CARE FOR OUR COMMON HOME”**

### **A. INTRODUCTION: A WELCOME OPPORTUNITY**

The Vatican regards international events such as Universal Exhibitions and International Recognized Exhibitions as privileged moments for reflection, discovery and dialogue with visitors and with the other official participants about major world issues.

Consistent with its participation in recent EXPOS on water (Zaragoza 2008) and food (Milan 2015), the Vatican is eager to contribute to reflections about the most urgent concern of energy, which affects all countries and the many disciplines - including education, economics, science, politics and diplomacy - that are called to “care for our common home”. This phrase, taken from the title of the environmental Encyclical of Pope Francis, will adorn the Vatican's pavilion, to be named “Energy for the Common Good: Care for our common home”.

### **B. FUNDAMENTAL POSITION: A UNIVERSAL ETHICAL FRAMEWORK**

The distinguishing mark of the Vatican's pavilion will *to set energy matters within a universal ethical framework*. We anticipate that other pavilions will display startling, impressive innovations in energy science and technology, enticing advances in consumer products, and proud explanations of the energy policies and strategies of States and of major industrial interests. Within this progress, Pope Francis asks, “What kind of world do we want to leave to those who come after us, to children who are now growing up?”<sup>3</sup>

This is the core of the ethical framework for energy. How can energy be made truly to serve the common good? Energy is meant to be a collective good with a universal destination: for our entire generation and for all generations to come. This derives ethically from the human dignity that we all share equally. We all share the same rights – in relation to our needs – and the same duties, both to each other and to the natural world. Recognizing that everything is interconnected, we must all exercise our

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<sup>3</sup> Pope Francis, Encyclical Letter *Laudato si'* § 160. Hereafter, LS.

rights and fulfil our responsibilities in an integral perspective: "development of the individual necessarily entails a joint effort for the development of the human race as a whole"<sup>4</sup>.

### C. FIVE COMPONENTS OF AN ETHICAL VISION OF ENERGY

The **first tenet** of an ethical framework or vision for energy is to acknowledge that the Creator fashioned the universe and all its glorious features for everyone. **The world's energy is meant for all of humanity.** We have not created the earth and its resources: we have received them as gifts to be cherished. But selfishness interferes with the divine intention. There is deep inequality with regard to energy at every level – among individuals and communities, nationally and internationally – in the forms of unequal distribution and consumption of energy and unequal access to related technology. The consequences of energy poverty can be dire in the extreme. The negative impacts of energy production and consumption are also unequally distributed.

The **second tenet** of an ethical framework adds the perspective of responsibility. **All humans are responsible for contributing to the world's energy.** Some people are directly involved in producing and distributing energy and applying it in myriad forms of manufactured goods and vital services. All people are involved in the wise and careful use of energy: we must conserve energy, apply it to worthwhile activities, and not waste it. Decision-makers must see to it that energy is wisely managed for the good of the whole human family. But today's energy situation shows an increasing demand for energy, due in part to scandalous waste: in senseless and hate-filled conflicts, in food wastage at each stage from harvest to distribution and consumption, in the increasing consumption of energy for unnecessary gadgets and harmful, even addictive and vile recreational items. While these might maximize profits, an unsustainable energy paradigm is maintained, which allows a minority to use plenty of energy, while many others lack the minimum energy needed for a decent life.

Pope Francis combines these first two ethical tenets in these words: "Each community can take from the bounty of the earth whatever it needs for subsistence, but it also has the duty to protect the earth and to ensure its fruitfulness for coming generations" (LS § 67).

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<sup>4</sup> Paul VI, Encyclical letter *Populorum progressio*, § 43.

The world is made up of countless communities and interests. The **third tenet** asks how they are to relate to each other in this realm. **Energy management must support peace, not lead to conflict.** "Peace is a gift of God and at the same time a task which is never fully completed"<sup>5</sup>, a task and a responsibility for the whole human family. Peace must be built and maintained unceasingly by all, for all; it is the fruit of a delicate and multi-level process. Sadly, energy can readily become a threat to peace. However, energy can and must become part of the solution: energy for peace, peaceful energy, energy for the common good of the whole human family.

Beyond the deep human desire for peace, a **fourth tenet** touches on the ethically preferred application of energy resources. Energy fulfils its destiny by **supporting full, genuine human development.** This is clear, for example, in health and education. With proper energy supply, clinics or hospitals can function properly, fragile medicines can be refrigerated properly, urgent surgical procedures can proceed as scheduled, women and infants in complicated childbirth can be saved. In the education sector, if the energy infrastructure is reliable, schools continue to be lit in the rainy or monsoon seasons, and children have proper lighting at home to study and do their homework assignments. *Future energy* requires a broad reflection that encompasses questions such as "what will we use energy for?", "how will we share the benefits?", "according to which criteria will we prioritize the access to energy?" and, finally, "how will everyone be involved?" What will build a proper human future will be the values of collaboration, solidarity and social justice – or, in one word, fraternity.

A further, **fifth tenet** complements the first four. **Cooperation among people of all faiths and belief systems** is essential to achieve a shared, viable energy future. Pope Francis addresses all of humanity, not exclusively the adherents to the Catholic faith, when he asserts: "Any technical solution which science claims to offer will be powerless to solve the serious problems of our world if humanity loses its compass, if we lose sight of the great motivations which make it possible for us to live in harmony, to make sacrifices and to treat others well" (LS § 200). All of us have the same human dignity, and in "mutual understanding and friendship, in this sacred communion, we must also begin to work together to build the common future of the human race"<sup>6</sup>. How encouraging it is to such cooperation put to work – sometimes modestly, nevertheless effectively – "by a countless array of organizations which work to promote the common good and to defend the environment, whether nat-

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<sup>5</sup> Benedict XVI, *Message for the World Day of Peace 2011*, § 15.

<sup>6</sup> Paul VI, Encyclical letter *Populorum progressio*, § 43.

ural or urban. ... Around these community actions, relationships develop or are recovered and a new social fabric emerges" (LS § 232). Indeed, "the majority of people living on our planet profess to be believers. This should spur religions to dialogue among themselves for the sake of protecting nature, defending the poor, and building networks of respect and fraternity" (LS § 201).

## **D. THE VISITORS' JOURNEY IN THE PAVILION**

### **"Energy for the Common Good: Care for our common home"**

The following sequence of areas suggests an itinerary of questions and commitment to the visitor. Each visitor will be invited to meditate on the universal destination of energy, how it unfortunately can be abused, its contribution to peace, and how *Future Energy* can be assured for all through everyone's contribution and collaboration.

### **FIRST AREA**

On entering the pavilion, images of Pope John Paul II during his 2001 visit to Kazakhstan, of Pope Francis and other Church representatives will welcome the visitors. Their first steps into the exhibit will help them to understand that the universe was created by God, and Creation is a mighty and beautiful act of energy, love and light. "God said, "Let there be light"; and there was light" (Genesis 1:3). A short cinematic show will explain that our universe is not a pointless chaos but the result of an orderly progression from light / energy to the formation of matter in all its forms. This proceeded according to the Big Bang whose laws are described by modern science<sup>7</sup>. This orderly beginning expresses the universal action of a Creator who finds his creation Good. Just as one God, one law, and one act of creation hold true universally, energy resources are and remain constitutively intended for a universal purpose, and they must be husbanded as such. Light and astronomy will be major elements of the show.

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<sup>7</sup> The Belgian priest-scientist Father Georges Lemaitre, professor of astronomy, was the first to formulate this theory of the origins of the universe. He served as president of the Pontifical Academy of Sciences.



## **SECOND AREA**

Visitors will proceed to an area with photos, videos and texts plus special effects (sound and light) that convey the negative aspects of how energy is generated, distributed and used today. How is the gift of energy being abused and wasted?

## **THIRD AREA**

The visitor will next observe energy-related initiatives that contribute to energy for all and are organized, funded and/or managed by the Catholic Church. Ground-breaking initiatives in remote and poor areas will be included, highlighting today's efforts of the Catholic institutions and NGOs, including the Church in Kazakhstan, to bring sustainable energy to marginalized and remote communities and homes.

## **FOURTH AREA**

Complementing and concluding the third area, there will be an area of inspirational, spiritual elements such as art masterpieces (original or high-quality copies). There will be testimonies and photos about the interreligious engagement of the Catholic Church. Finally, the Church's particular contribution to scientific research, e.g. the Vatican Observatory and the Pontifical Academy of Sciences, will also be displayed.

Vatican City, 3 August 2016

Our Theme statement, once approved by the EXPO Organization, was kept under embargo until it was formally presented during a press conference hosted by Interfax, in the city of Almaty, in November 2016. At the same time, it was also revealed to the journalists accredited to the Press Office of the Holy See.



11 November 2016



Cardinal Peter Turkson and the Bishops of Kazakhstan gathered in the Interfax Agency of Almaty on the occasion of the presentation of the Theme Statement. In the foto there are also the Apostolic Nuncio, Mons. Francis A. Chullikatt; the Deputy-Commissioner for the participation of the Holy See to the EXPO 2017, Fr. Guido Trezzani; journalists from Interfax; and the Papal Delegate of the Congregation for the Oriental Churches for the Greek Catholics in Kazakhstan and Central Asia, Father Vasilij Govera.

22 June 2017



Press conference at the EXPO Media Center. From left: Fr. Aleksander Posacki, Bishop Athanasius Schneider, and Fr. Stanisław Jaromi.

## VII. WORK BEGINS

### THE INTERNATIONAL PARTICIPANTS MEETING



The Delegation of the Holy See participating in the International Participants Meeting, a major coordination meeting which took place in Almata months before the opening of the EXPO. 1<sup>st</sup> from left is Matteo Perderzoli, a representative of our General Contractor (MCI).

## **PREPARING A PAVILION. REFLECTION FROM THE REPRESENTATIVE OF THE GENERAL CONTRACTOR IN CHARGE OF OUR PAVILION, MATTEO PEDERZOLI**

While serving as Curator of the European Union Pavilion during Expo Milano 2015 I remember visiting the neighboring Holy See Pavilion often – both for a moment of peaceful contemplation and yearning to be involved in its making the following time around.

I believe that for any curator working for the Holy See is a *humble touch of the eternal* with a front row seat on the history and evolution of civilization, both Western and globally by way of indirect influence. However when I ran across the proposal brief, science turned out to be the element of surprise and further fascination. I mean, *who* would ever imagine that a priest was a scientist AND the originator of the Big Bang theory about the origin of the Universe?!

And what a fantastic story to be told for the Vatican to start with the right foot in a country where Catholicism is the result of a pure accident of history and Catholics are just 1% of the population!

In hindsight, I am glad we were able to convey that science and religion can walk hand in hand via our circular visual narrative spanning from the universe to humankind and the environment (sustainably), and from the uses of energy – my favorite definitely being the energy of life (see page 52) – to the final cosmological vision reconciling the Genesis and the Big Bang.

Our team delved into the project with impetus and enthusiasm aiming to help the Dicastery convey key messages in immediate and emotional ways. I hope we were able to achieve that by harnessing our competencies through our creative energy and personal dedication.

Matteo Pederzoli, MCI

24 January 2018



Preparing the pavilion.



The rear façade of the pavilion: a photograph of the Vatican with its photo-voltaic panels and the emblematic St. Peter's Cupola, and a set of trilingual inspirational messages, including quotes from the encyclical *Laudato si'*.



A small planetarium was installed inside the pavilion. It was equipped with a special projector thanks to the dedication of Prof. Philip Sakimoto, astronomer, from the University of Notre Dame. A special and immersive video, *Let there be light*, had been conceived for the pavilion (see page 39).



From left: Architech Naziha Mestaoui, artistic designer for the interior of the pavilion and one of the external facades (sadly she died before the publication of this book); Professor Philip Sakimoto; Father Guido Trezzani; and Tebaldo Vinciguerra, the Vatican-based coordinator.

A monumental portrait of Pope Francis was embedded in one of the facades of the Pavilion. The image of the Holy Father was realized through thousands of small metal disks nailed on birch panels. The portrait was in the open, exposed to the wind, and the disks could swing: a form of kinetic energy.



Installing one of the facades of the pavilion. It contains the portrait of the Holy Father and the stemma of the Holy See.

## DESIGNING THE GOLDEN ROOM. REFLECTION FROM ARCHITECT AND ARTISTIC DESIGNER NAZIHA MESTAOUI

The Holy See Pavilion was created as a universal and meaningful immersive experience connected with Pope Francis' *Laudato Si'* encyclical and a strong inspiration coming from the first ecologist saint, Saint Francis of Assisi and his *Cantico delle Creature* canticle. Between spirit and heart, history and modernity. Everything is connected...

Working with the Vatican for the pavilion was a real adventure and an honor.

The theme of the pavilion proposed by the Vatican was thrilling. It reconciled science and faith, the Big Bang theory and Creation (genesis). It also reconnected humans with nature, including humankind in the network of life.

This vision resonated strongly with me. As an artist I focus my work on love and our interconnectedness with all living beings, including trees. One of my last works – 1 Heart 1 Tree – transforms monuments into virtual forests and invites all participants to give birth to a tree that is projected on the monuments and grows to the rhythm of their heart. And every virtual tree is then planted in a reforestation program.

As I read the proposal brief, the inspiration came very quickly and I wanted to share a poetic journey ending in a golden room filled with majestic historical reproduction of artworks representing the creation. Visitors entered into a golden room covered with still and animated iconography depicting the genesis. The whole space was mixing tradition and modernity, mosaics, paintings and projection mapping. The big bang and the creation would blend beautifully.

As I started to work on the concepts and representation for the project, I created a storyboard for the Golden Room, illustrating the visual ideas, rhythms and representations. In the process, I wanted to share these ideas and visuals with the Curator/Producer and with Vatican to make sure I would be relevant to their intention. And I was so happy when they asked me to push it further as they accepted my representation of their intentions.

The whole room covered with golden tint was filled with historical reproduction of paintings and 13th century mosaics representing the creation.

Then a projection mapping started to be overlaid, and from a painting representing God's illumination, a huge energy started to blow, creating light, then the sky was created and was overlapping with the entire room, slowly the water started to fill the room and life started to grow. The different sequences of the genesis give birth to our environment, trees grow on the golden room's wall in a very poetic way, plant and trees, mixing Monreale Mosaics representation and 3D trees. Then animals started to fill the room and when man started to be visible in the representation, we could see the interconnectedness that exists between all species, every species is related, and that link is love that binds us.

We had the chance to have an amazing pavilion team, MCI and Nussli and a very competent and dedicated local team sharing their energy and kindness with the audience.

To me the collaboration with the Vatican has been a deep and sensitive journey and I was thrilled to have the honor to share the vision with the audience that there is something sacred in everything that exists and in all living beings.

The whole space was bathing into a very luminous and inspiring music, plunging the visitors in introspection.

Naziha Mestaoui, Act with Art

20 February 2018



## VIII. OUR TEAM



Staff and volunteers from our pavilion. The beige gilets had been manufactured in the "Ark Village": a center offering accommodation, education, some basic health services and rehabilitation programs for young orphans and children with handicap in the Diocese of Almaty. After the EXPO, they were the recipients of a special legacy project (page 107).





Card. Peter Turkson surrounded by the Deputy-Section Commissioner (Fr. Guido Trezzani), staff from the Dicastery for Promoting Integral Human Development (Fr. Bernard Munono Muyembe, Fr. Nicola Riccardi, Fr. Robinson Wijesinghe Arachchige, Ms. Margherita M. Romanelli, Mr. Luca Giannini, Mr. Roberto Paglialonga, and Mr. Tebaldo Vinciguerra), the Secretary of the Apostolic Nunciature in Kazakhstan (Fr. Jean-François Simonart), a representative from the Secretariat of State's Section for Relation with States (Fr. Tymon T. Chmielecki), a Bureau Chief of the Pontifical Council for Interreligious Dialogue (Fr. Khaled Akasheh), and the CEO of the public relations company 3rd Floor (Mr. Jacopo Luigi Stecchini).



## IX. THE INAUGURATION



Our pavilion was inaugurated on the 1<sup>st</sup> day of the EXPO. In the photos: representatives of the companies involved in the design and building of the pavilion, of the Holy See, and of the local Church.



## X. THE JOURNEY IN OUR PAVILION BY TEBALDO VINCIGUERRA

The yellow-white design evoking the Vatican flag on the atrium façade welcomed visitors to our Pavilion and announced its theme: "Energy for the common good: Caring for the common home".

Two photos evoked Pope John Paul II's visit of to Astana (September 2001): a reception in a concert hall with the Kazakh blue-yellow coat of arms well recognizable, and the kissing of the earth of the host-country upon his arrival. In the simple yet highly symbolical gesture, Pope John Paul expressed his love and his deference to the countries he visited: he was embracing the land with its fields, its forests, its cities and hills, where the human adventure takes place.

To express the link between the universal Church and the local Church, a picture of the Catholic Cathedral of Karaganda, a Kazakh Church, was also included.

Finally, a photo of Pope Francis stretching his arm in a friendly greeting invited the visitors to explore our Pavilion.

The first room of the Pavilion hosted the information desk and a video of Pope John Paul II's visit to Astana, including his historically notable, warm hug with President Nazarbayev. Furthermore, this first space presented the Vatican Observatory, also known as *Specola Vaticana* and is one of the oldest astronomical institutes in the world, as well as the activities of Caritas Almaty, which implemented many energy-related initiatives on the occasion of the EXPO 2017. Caritas Almaty also runs selective waste collection programs, and supports the "Ark Village", a center offering accommodation, education, some basic health services and rehabilitation programs for young orphans and children with disabilities in the Diocese of Almaty. Finally, an information panel dedicated to interreligious dialogue explained that the topic includes "encounters of religious leaders and believers; joint statements and advocacy about a wide array of issues; joint study groups for mutual knowledge of the religious traditions and for concerted actions expressing profound solidarity with all the members of human family, es-

pecially with the needier persons. Interreligious dialogue is the way of the future". This concern is a tenet expressed in our Theme statement: "cooperation among people of all faiths and belief systems is essential to achieve a shared, viable energy future".



Visitors proceeded into our planetarium: a cylindrical room with a semi-spherical roof and a dim-light. The immersive show, entitled "Let there be light" and designed for our pavilion, described the story of the Big Bang and astronomy, offered a reflection about light, time, and energy (page 39) and highlighted the work of George Lemaître, a Belgian priest and astronomer.

After leaving the planetarium, the journey continued in a dark corridor, with printed photographs adorning its black walls. These images represented the ambiguous ways humanity has used energy: for transport, for war, for

healthcare... and, also, the variety of energy sources which have been used, such as coal, steam, water, fossil fuels, photovoltaics, and the energy from the human body, among others. The neon lights which illuminated the corridor intermittently switched off simulating brief blackouts, to implicitly suggest - into the visitors' mind - that the availability of energy should not be taken for granted. A map of the Earth at night blatantly showed the inequity that characterizes access to energy, with some urban areas illuminated at night while entire countries lack illumination.

This is how we represented the "Second area" announced in the Theme statement. Moreover all these energy-related concerns had been previously studied in the reflection *Energy, Justice and Peace* published in 2014 by the Pontifical Council for Justice and Peace.



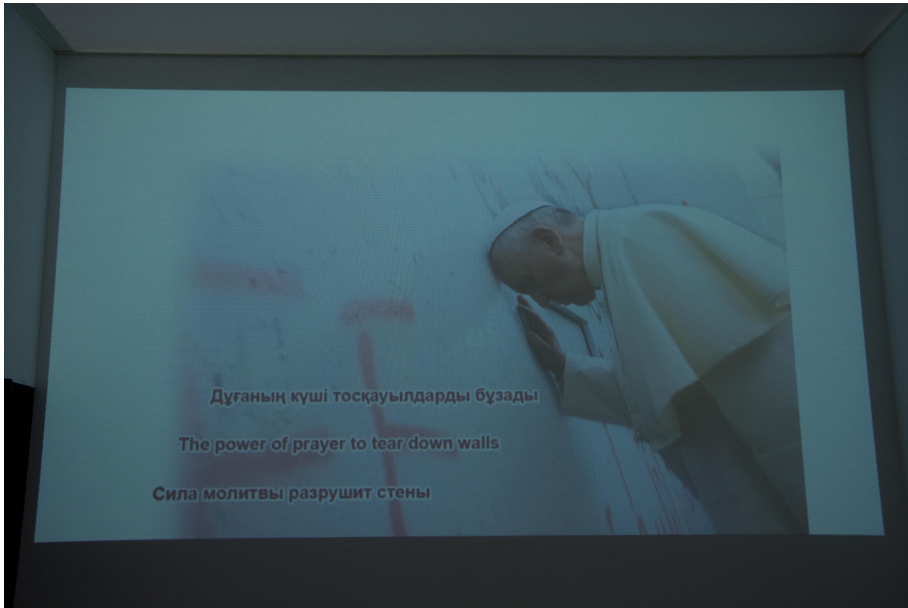
Suddenly, transparent slabs replaced the solid floor of the corridor, allowing the visitors to see a pile of trash, and literally to walk above it. Indeed, a part of our energy consumption results in trash and waste. As Pope Francis wrote, "The earth, our home, is beginning to look more and more like an immense pile of filth" (*Laudato si'*, § 21).



In the following small room, the flickering flame of a candle illuminating a desk covered with several papers, with words such as "reading" and "studying", represented what energy can make possible. Indeed, safe energy for proper lighting is a prerequisite for education in the evening.



Visitors came across a heavy curtain. After passing, they entered a stark room dubbed "meditation room". The white ceiling, floor and walls contrasted sharply with the initial part of the visit. In almost total silence, projected images scrolled on one of the walls, showing people that inspire a very different "energy" or "power" (yet so needed!) compared to the energy sources which had been previously displayed in the pavilion's aforementioned corridor (fossil fuels, photovoltaic, water,...). Namely: the power of prayer.



Pictures of Pope Francis, Mother Teresa of Calcutta, Nelson Mandela, Mahatma Gandhi and a group of Muslims scrolled with the following tag-lines: "the power of prayer to serve the poor", "the power of prayer to fight injustice", "the power of prayer to promote nonviolence"...

The following room – named the “best practice” room – realized the “Third area” announced in the Theme statement through short videos, information panels and scale models, which displayed several energy-related initiatives organized, funded and/or managed by the Catholic Church that contribute to energy for all in a safe and sustainable way in many countries. Ground-breaking initiatives in remote and poor areas had been included, highlighting the efforts of the Catholic institutions and NGOs, including the Church in Kazakhstan, to bring sustainable energy to marginalized and remote communities and homes.

The following initiatives were displayed:

- The sustainable use of wood as a legacy from monasteries which developed a harmonious coexistence with nature, especially fields and forests. Areas of forest have been managed in a sustainable way for centuries, providing material for buildings and tools and a source of income (through timber selling) and energy.
- The sustainable energy mission of the Archdiocese of Calcutta (India): designing and installing renewable energy projects (both solar water heating systems and photovoltaic plants), as well as many energy-related training initiatives. The Archdiocese has an official social service society which works on these projects.
- A 30-month project coordinated by Caritas in the *semiárido*, a region located in the northeastern part of Brazil. This initiative included the installation of more efficient stoves in the households in order to reduce the demand for wood, the construction of biodigesters that produced energy from the excrements of herds instead of purchasing gas; the installation of photovoltaic panels.
- The commitment of the Creighton University (United States of America), a Jesuit University that integrated energy science and sustainability into its curriculum and was one of the first Catholic universities to begin offering a degree program in environmental science around 35 years ago. The University houses a collection of approximately 120 kW of photovoltaic, wind and solar thermal renewable energy systems with varying technologies, which provides students with a greater understanding of renewable energy.
- The initiatives of the Diocese of Monterey (United States of America) which reduced the need for electricity in many of its buildings by installing LED lighting, replacing inefficient electrical equipment or water

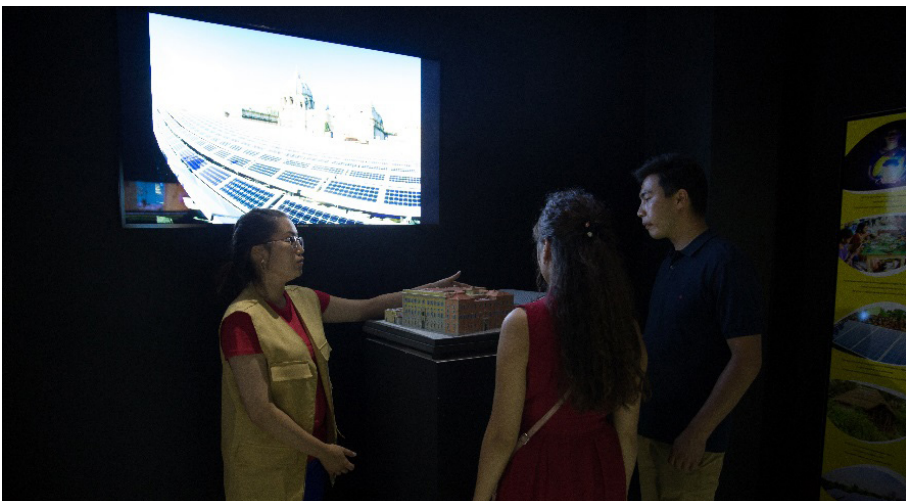


pumps with more modern systems, installing double-paned windows, adding insulation, sealing cracks around doors and windows, and by overall upgrading of buildings. The Dioceses has also advocated (at local government level) for the establishment of a local non-profit, community-owned electric power utility that will use solar and wind power to provide a large part of the entire community's needs.

- The Church's initiatives in Kazakhstan: in 2013 a stove was built inside a parish of the Archdiocese of Astana and was connected to the local heating system. The parish's stove uses post-harvest agricultural biomass (husk), and contributes to the heating of the school, church and parish house, and several other buildings. Moreover, Renovabis is also financing renovation works in many buildings belonging to the Catholic Church in Kazakhstan, in order to make those building more energy-efficient.
- The monumental photovoltaic roof installed above the Audience Hall "Aula Nervi" inside the Vatican, during the pontificate of Pope Benedict XVI. At that time it was one of the most ambitious photovoltaic projects in Europe.



- The "Solar powered Computer Bus" used by the Salesian priests in the diocese of Shivamoga (India), which travels to several schools each week. The bus hosts a computer classroom containing a dozen laptops powered by the photovoltaic panels carried by the bus. Going from village to village, students receive computer lessons in the bus, while also learning about renewable energy.
- The improvements in the archdiocese of Bangalore (India) and in the Apostolic Vicariate of Calapan (the Philippines): some schools have been equipped with photovoltaic panels especially designed to charge small batteries that students can bring home to power their study lamps; and/or have been also equipped with photovoltaic panels that are designed to provide light and power to basic equipment needed by teachers so they can teach more effectively, including solar-powered projectors for rural schools which do not have access to electricity.
- A rural training center, linked to a Salesian University in India, which promotes the use of solar-powered sewing-machines in areas getting only a few hours of electricity a day, with affordable loans and proper maintenance for the machines.
- The collaboration, in the Diocese of Isiolo (Kenya) between CAFOD and Caritas Isiolo to provide renewable energy to a Health clinic. Before solar lighting arrived, the clinic closed at night. Moreover, the photovoltaic panels also grant safer access to clean water in the clinic and enabled the use of a refrigerator for vaccine storage.



A 4-song playlist played on loop in the "best practice" room. Lastly, a special animation in the room was triggered only by simultaneously pressing several buttons concealed in the walls of the room and located a few meters apart. It thus required the involvement of many visitors to push each of these buttons. If only a few buttons were pressed, the animation shown would not be complete. Only by pressing all of them the visitors had the best experience. This is because, in order to address energy-related challenges, both the involvement of everyone and an integral ecology approach (as explained in the 4<sup>th</sup> chapter of the encyclical letter *Laudato si'*) are needed. As our Theme statement explains, "the world's energy is meant for all of humanity" and "all humans are responsible for contributing to the world's energy".

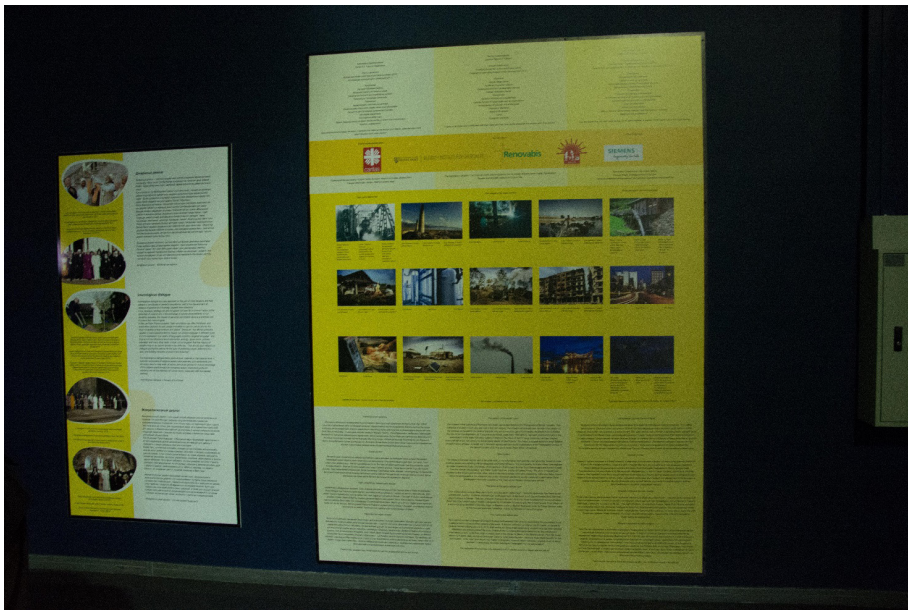


Finally, the visitors entered the "Golden room". It featured a layered ceiling with a gold star-pattern wall evoked the interior of a religious building. The room was intended to evoke wonder and inspiration and contained high-quality replicas of art masterpieces including:

- A selection of mosaics from the Monreale Cathedral (Italy) depicting the creation of the world and God's decision to entrust the garden he created to the humans, as it is written in the book of Genesis. Having reached the conclusion of the journey in the Pavilion, visitors could ponder: how are we treating this world, our common home, that God has entrusted to us?
- The icon of the Transfiguration painted by Theophanes the Greek and kept in the Tretyakov Gallery (Russia) which portrays Christ as the source of light and energy. Faith can offer strong motivation for repentance, commitment, solidarity and perseverance!

- A fresco of Saint Francis preaching to the birds from the Basilica of Assisi (Italy). "He was a mystic and a pilgrim who lived in simplicity and in wonderful harmony with God, with others, with nature and with himself. He shows us just how inseparable the bond is between concern for nature, justice for the poor, commitment to society, and interior peace" (*Laudato si'* § 10) and he dedicated a marvelous couplet to the Sun in his renown *Cantico of the Creatures*.

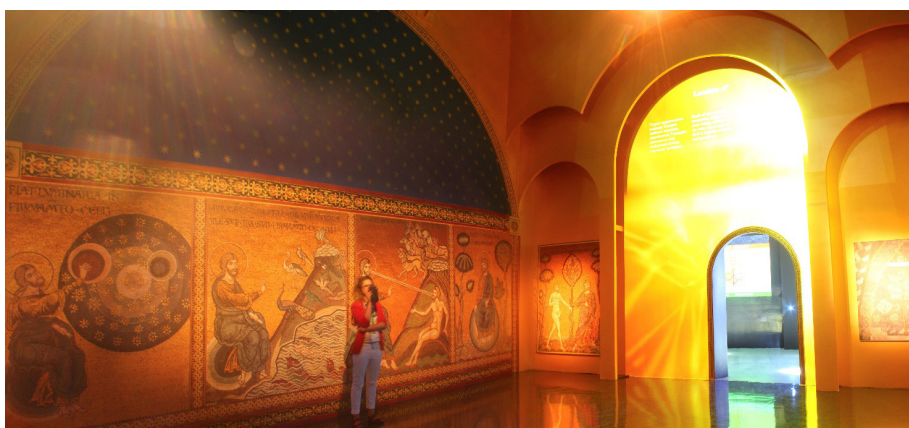
Excerpts of the encyclical *Laudato si'* and of the *Cantico of the Creatures* were projected on the walls, as well as some animations inspired by the above-mentioned mosaics. Another 4-song playlist played on loop in the Golden room.







The Golden Room.



## XI. LET THERE BE LIGHT: THE PAVILION EXPERIENCE BY PHILIP SAKIMOTO AND LEONARD DELORENZO

The most remarkable thing about the Universe is that it exists. St. Augustine of Hippo expressed this idea in the early fifth century when he wrote:

"Whatever miracle happens in the world, it is certainly a lesser marvel than the whole world, that is to say, the heavens and the earth and all that is in them, which God undoubtedly made. But the manner of its making is as hidden from man and as incomprehensible to man as is he who made it."

The incomprehensibility of the "manner of its making" was seemingly penetrated in the early twentieth century when a Belgian Catholic priest and physicist, Fr. Georges Lemaître, recognized that the entire Universe is expanding and, thus, must have had its origin in what we now call the Big Bang.

***"The whole matter of the world  
must have been present  
at the beginning..."***

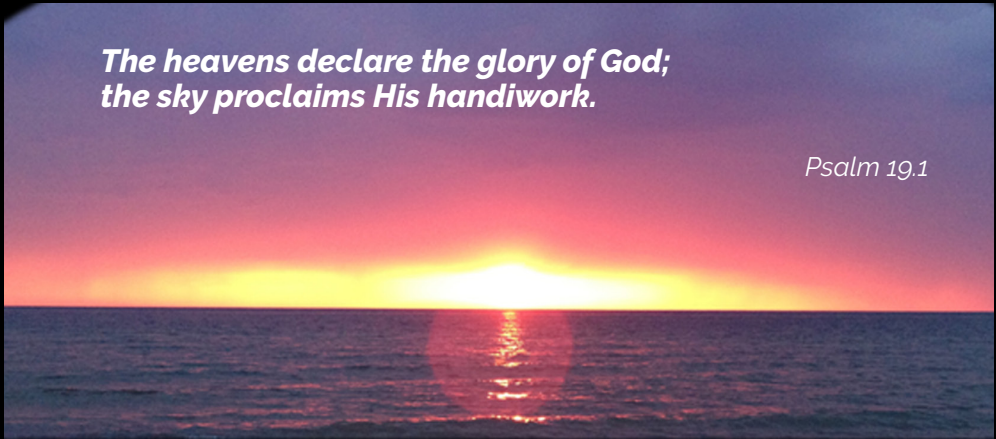
*Father Georges Lemaître, Physicist  
Originator of the Big Bang*



In order to trace the unfolding of the universe from the Big Bang to the present-day Sun and Earth, we invite visitors to enter a planetarium. In that environment, they may witness the glory of God as manifested in the gift of light.

***The heavens declare the glory of God;  
the sky proclaims His handiwork.***

*Psalm 19.1*



***"The universe... shows forth  
the inexhaustible riches of God."***

*Pope Francis*





We immerse the audience in complete darkness and ask them to imagine what it would be like if there had not been an act of creation.

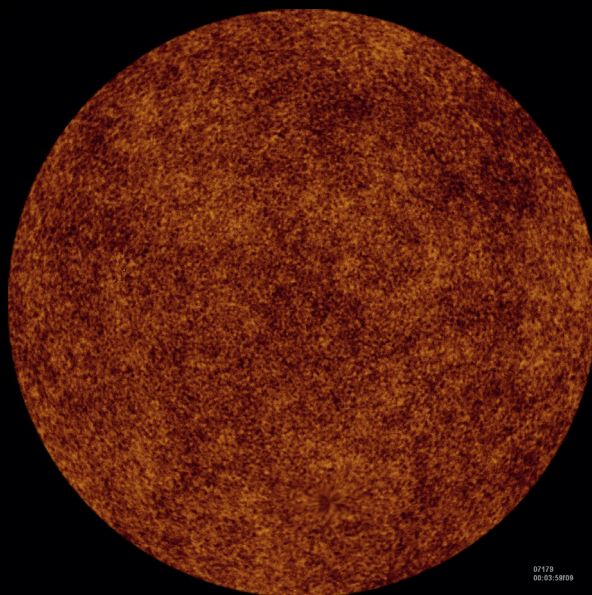
*If the Word of creation were not spoken, nothing would be.  
There would be nothing to see, no one to see it;  
nothing given, and nothing to receive.  
We cannot really imagine “nothing”—  
all we can imagine is the absence of everything we have come to know.  
So imagine darkness and silence where nothing ever happens.  
In this empty stillness let us imagine the Word of one command only:  
“Let there be”.*

*Let there be.  
The principle of creation is the permission, the gift  
of calling into existence what does not exist.  
Without this Word, nothing would be  
And only with this Word may anything continue to be.  
Here at the limits of our vision we see what  
bursts forth from the first sound of the Word:  
Let there be light.*

With that command, the planetarium dome suddenly fills with bright white light that represents what you would see had you been present in the very early universe just after the Big Bang. In truth, this light would have been very high energy gamma rays, invisible to human eyes. We sometimes describe the early universe as a place of pure energy, but pure energy is light.

It all began some 13.8 billion years ago. The highly compressed infinitesimally small volume of the early universe began to expand rapidly. With expansion, the universe cooled. With cooling, matter began to condense out of the light. At first elementary subatomic particles formed, and then they coalesced into more familiar things like protons and electrons. The electrons blocked the light from travelling very far, scattering it about in the same way that water droplets scatter light during a heavy fog. Meanwhile the light itself was changing into less energetic forms of light—first x-rays and then ultraviolet light. We see this in the planetarium, as the original white light slowly fades into a shade of deep purple.

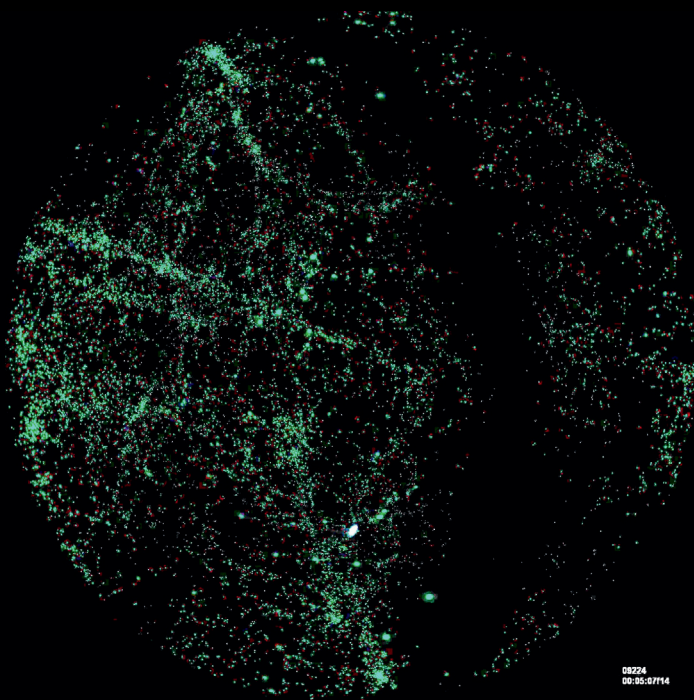
As the universe cooled further, electrons joined to the protons to form the first atoms—atoms of hydrogen. With the electrons no longer free to scatter light, the universe became transparent. The remaining light was then free to travel throughout the universe, which it has been doing ever since. Today we see that light coming to us from all directions, bringing direct evidence of the beginning of the universe in the Big Bang. Since the universe today is much cooler than it was back then, the light is now microwave radiation. We call it the Cosmic Microwave Background radiation.



*The Cosmic Microwave Background radiation, falsely colored in shades of orange, fills the planetarium. The mottled appearance represents slight differences in temperature which, when carefully analyzed, reveal the physical structure of the early universe.*

***Let there be.  
Traces of the unity of all that exists are visible  
in the patterns that tie things together.  
Light touches on light  
While darkness hides an order that we cannot see  
except by its effects.  
The energy of creation pulses through  
the visible and the invisible, echoing in the Word:  
Let there be form.***

The first stars and galaxies began to form within, perhaps, a half billion years of the Big Bang, and more galaxies continued to form for billions of years thereafter. The stars formed when those first atoms were pulled together by the forces of gravity and then compressed so strongly that nuclear fusion began. In that process, a portion of the hydrogen in the centers of the stars was converted into helium, and a bit of that matter was transformed back into light. Vast collections of stars formed galaxies. The light we see coming from each galaxy is the combined light from all of the stars within it. Most of the starlight is what we call visible light—light that is visible to human eyes.



*Each dot represents the actual location in space of a galaxy, and each galaxy contains billions of stars.*

We focus our attention on one particular galaxy, the one we call the Milky Way. In it, hundreds of billions of stars form a vast disk with spiral arms. Within those arms new stars are constantly forming and adding their light to that which comes from this galaxy. Five billion years ago, one of those stars—the one we now call “the Sun”—was formed. It lies about two thirds of the way from the center to the edge of the Galaxy.



*In the planetarium, the Milky Way galaxy is not a single image but is actually comprised of individual images of each of the stars within it. We can therefore take the audience on a virtual journey into the Milky Way, searching for that one star we call the Sun.*

***Let there be.***

***The wisdom flowing from cosmic space to our personal spaces teaches that the power of life continues only where it is shared.***

***We who are given the power to choose how to use energy***

***Are capable of deciding whether to share energy or hoard it.***

***But what is natural to creation itself is that each part of creation is intended to give permission for other things to be, in a Word to:***

***Let there be life.***

Of the thousands of planets we have discovered so far in our Galaxy, the Earth is the only one on which we know there is life. All of that life lives within the Earth's atmosphere, a thin turquoise blue line surrounding the planet. The Sun provides the gift of light, the source of energy that sustains all life. Sunlight induces photosynthesis in plants, and the plants in turn nourish the higher forms of life. The Sun also warms the planet. The atmosphere regulates the warmth, allowing life-giving sunlight to enter but blocking some of the heat from escaping. A delicate balance between the incoming sunlight and the escaping heat maintains the Earth at a temperature optimal for sustaining life.



*All life that we know of lives within the Earth's atmosphere, seen here as a thin turquoise blue line surrounding the Earth and backlit by the Sun.*

***Let there be.***

***We who live from the energy given to us  
are responsible for giving it to others so they may live.***

***The rich giving to the poor;***

***The present generation giving to future generations;***

***Those who easily receive giving to those who wait to receive;***

***Life on this planet—the only known life in the whole cosmos—***

***Has been given to our care.***

***In caring for this planet's balance of energy,***

***We have the power to say to others,***

***May you be.***

Dr. Philip J. Sakimoto is an astrophysicist who currently directs the Program for Academic Excellence at the University of Notre Dame and teaches in the Sustainability Minor. He was formerly the Program Manager and Acting Director of Space Science Education and Public Outreach for the U.S. National Aeronautics and Space Administration (NASA) and the 2008 recipient of the Adler-Mansfield Award for encouraging innovative ways to increase the public's awareness of the universe.

Dr. Leonard J. DeLorenzo is faculty of the McGrath Institute for Church Life and teaches theology at the University of Notre Dame.

#### Image Credits:

Cosmic Microwave Background: European Space Agency (ESA) Planck Mission.

Galaxies: HyperLEDA database, Observatoire de Lyon (France) and the Special Astrophysical Observatory (Russia). Data visualization by Keith W. Davis, University of Notre Dame Digital Visualization Theater.

Milky Way Galaxy: Digital Sky 2, Sky-Skan, Inc.

Earth and Sun: Digital Sky 2, Sky-Skan, Inc.

#### Quotation Sources:

Georges Lemaître: "The Beginning of the World from the Point of View of Quantum Theory," *Nature*, volume 127, page 706 (09 May 1931).

Pope Francis: *Laudato Si': On Care for Our Common Home* (The Holy See: Vatican Press, 2015).

St. Augustine: *City of God*, trans. Henry Bettenson (New York: Penguin, 2003)



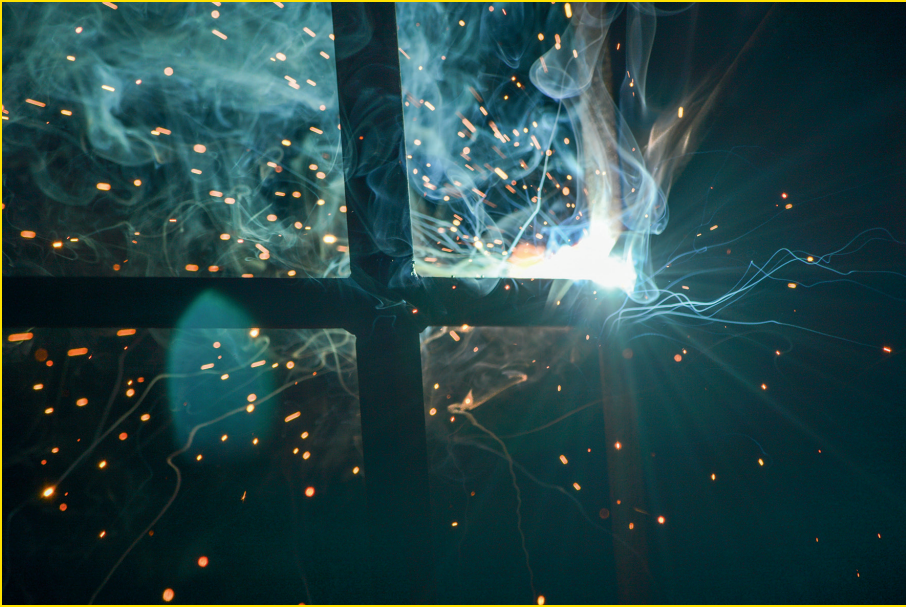


*1. Eccher Collection, Historical photographic Archive, Department for the cultural heritage of the Autonomous Province of Trento*



*2. Luca Catalano Gonzaga – Witness Image*





3. Asaf Ud Daula



4. Luca Catalano Gonzaga – Witness Image



5. Carlo A. Turra, *Photographic archive of the Paneveggio Pale di San Martino Natural park*



6. Luca Catalano Gonzaga – *Witness Image*





7. *Hugo Munoz*



8. *Luca Catalano Gonzaga – Witness Image*



9. Luca Catalano Gonzaga – Witness Image



10. Hugo Munoz





11. Hugo Munoz



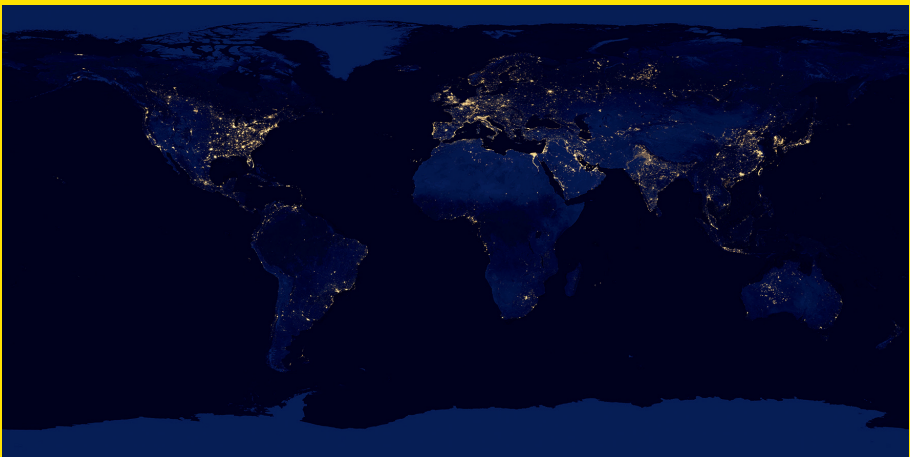
12. Luca Catalano Gonzaga – Witness Image



13. Asaf Ud Daula



14. Nightman1965 – 123RF Archivio Fotografico



15. NASA Earth Observatory/NOAA NGDC

## The sustainable energy mission of the Archdiocese of Calcutta - India

Seva Kendra Calcutta is the official social service society of the Archdiocese of Calcutta, in the state of West Bengal, India. Seva Kendra Calcutta's foray into sustainable and renewable energy began with a crisis in May 2007, when a massive cyclone along with a tidal wave struck the coast in West Bengal.

After the cyclone, 285 villagers, especially youth, were trained in assembling and maintaining solar lanterns, and 115 women received training to become entrepreneurs. More than 20,000 solar lanterns have been distributed or sold.

Solar water heating systems have been installed in hospitals, convents, homes for aged people, colleges and technical schools. A total of 242 heating units has been installed in 58 institutions managed by the Catholic Church. The amount of heating capacity installed in each institution ranges between 300 and 500 liters per day.

Numerous solar photovoltaic plants have also been deployed in approximately 30 locations such as households in urban area or remote villages, hostels, hospitals, schools and convents. Some plants are grid linked, while the majority is off-grid. The output power achieved by one of those



Technician trained by SKC



Session on assembling of solar lanterns



Rooftop installation at a girls hostel



plants under full solar radiation usually ranges between 1 and 5kW for the small ones (including one hybrid system combining photovoltaic panels and wind mill), and exceeds 30kW for the bigger ones.

Similar figures can be given for the solar photovoltaic lighting units installed in recent years. Usually those units include LED lights and batteries.

Many of the abovementioned systems have been installed between 2010 and 2016 directly by Seva Kendra Calcutta, and only a few by subcontractors. This implies that, in recent years, the Archdiocese of Calcutta has acquired a precious expertise in designing and installing renewable-energy projects, and in facilitating their appropriation by the local communities. Specific training activities contribute to a far-reaching awareness about the advantages of renewable energy systems at a decentralized level, as well as to the dissemination of assembly, maintenance and commercial skills, frequently in poor zones which need it the most. These are key factors for the future. Finally, it shall not be forgotten that, in an area where extreme weather events such as cyclones happen, off-grid energy systems are very pertinent. Catholic agencies from other countries, such as Misereor from Germany, contribute to this effort in West Bengal both financially and by helping in the assessment of the needs and of the opportunities or in the impact-study after the completion of the projects.



Home lighting installed  
by SKC



Photovoltaic installation at Seva  
Kendra Calcutta (SKC) Head Office

## Photovoltaic technology and education: the work of the Church – India and the Philippines

According to a recent study, worldwide 188 million children attend schools not connected to any type of electricity supply - in other words, almost one child out of every three goes to a school that lacks electricity and thus access to lights, refrigerators, fans, computer and other digital learning aids. Moreover, the lack of electricity causes an unfavorable learning environment at home. Many Catholic schools and universities around the world have used solar power to mitigate this through several innovative programs, including some schools in India and Philippines.

In the archdioceses of Bangalore, Karnataka (India), schools have been equipped with photovoltaic panels especially designed to charge small batteries that can be carried back by students to power their study lamps. A fully charged battery provides illumination for studying, drawing or reading. In the Apostolic Vicariate of Calapan (the Philippines), with the help of an association founded by Jesuits, some schools have been also equipped with photovoltaic panels that are designed to provide light and power to basic equipment needed by teachers so they can teach more effectively. The light also extends learning sessions even through the dark rainy days, and for night tutorials.



Training in the Philippines

In the diocese of Shivamoga (India), the Salesian priests have implemented an innovative Solar powered Computer bus which weekly tours several schools. The bus hosts a computer classroom containing a dozen laptops powered by the photovoltaic panels carried by the bus. Going from village to village, students receive computer lessons in the bus, while also covering a lesson on renewable energy. You can see a scale model of the bus in this room.

For rural schools which do not have access to electricity, the archdiocese of Bangalore, Karnataka, has implemented solar-powered projectors to make interactive educational content accessible to rural schools during regular lessons. Customizing the content according to the local language and local curriculum, the digital visual aids aim at capturing the student's attention and making the lessons engaging. This equipment is in demonstration in this room.



Using the projector



## The legacy from monasteries

Wood represents a source of energy since the earliest days of mankind. The energy from wood combustion has been used during millennia for cooking, heating, and lighting; it also proved indispensable for the development of chemistry, metallurgy, steam power, and of many handicrafts.

Even today, millions of people rely on wood to meet - at least partially - their daily energy demand, mainly for cooking and heating. In this utilization, what is required are: sustainability (how the forests are managed), health, safety and efficiency (which combustion devices are used and how they are used).

Catholic monasteries, as well as monasteries from Orthodox traditions, were frequently built outside urban zones, where both arable land and forest were available. A harmonious coexistence has been developed: the monks or nuns, on one hand, and the nature - especially the forest - on the other hand. In many cases, forest patches have been managed in a sustainable way providing not only material for buildings and tools, but also a source of income through timber selling, and a source of energy. Now, for such energy are used sophisticated stoves and decentralized heating systems. Both the disappearance of forests and their replacement with monoculture have been avoided in the lands surrounding ancient monasteries.



Pictures provided by the Einsiedeln Abbey,  
a Benedictine monastery in Switzerland

Thus, many religious orders developed an inspiring tradition about forest management - these traditions are widely recognized and some monasteries even received prizes for their achievements. Their knowledge has been consolidated over centuries and, in some exceptional cases, even during one millennium.

The monastic experience is a precious legacy, since the monks know how wood can be used as a source of future energy. It is not a mere technical challenge but also an attitude, since a correct relation between human societies and the environment is fundamental. Monks traditionally work at direct contact with nature, as ancient documents clearly show, while their spiritual life combines contemplation and gratitude for the environment received as a gift from God. Moreover, the fire from wood combustion is frequently used in many liturgies and ceremonies. Hence, the Latin axiom *ora et labora*, pray and work, is a useful contribution to any reflection on future energy.

Monk cutting a tree. Miniature taken from a manuscript realized in the Cîteaux Abbey of the Cistercian order, in France, at the beginning of the 12th century.

Picture provided by the Public Library of Dijon, France, ms 173, f. 41r





## **The commitment at University-level United States of America**

Creighton University has been consistently recognized by the Princeton Review in its annual guide to the most environmentally responsible colleges across the United States and Canada, and received recognition again in 2016.

Creighton has integrated energy science and sustainability into its curriculum, with growing interest among students. Creighton was one of the first Catholic universities to begin offering a degree program in environmental science more than 25 years ago. In 2011, the University launched the Energy Technology Program, and, more recently, began offering a major and minor in Sustainability Studies.

On campus, the University houses a collection of approximately 120 kW of photovoltaic, wind and solar thermal renewable energy systems. With 420 photovoltaic panels, representing five manufacturers with varying technologies, Creighton also has four windspires along with a small solar thermal unit that provides students with a greater understanding of renewable energy.



Additionally, sustainability-themed or focused classes can be found in a variety of disciplines that are open to all undergraduate students, regardless of major. Creighton's scope reaches beyond campus as well, fostering partnerships with other Jesuit institutions and investigating opportunities through the Creighton Global Initiative. Outside the classroom, Service & Justice Trips include sustainability options, and a Sustainability Alliance is being formed to gather all student groups together and coordinate efforts. Notably, more than 300 Creighton alumni are working in fields such as environmental education, earth system science, conservation ecology, and climate change research.

Cultivating a sustainable campus environment and educating students to be stewards of Creation are key elements of the University's mission as a Jesuit, Catholic university. Creighton seeks to implement and model environmentally responsible practices that contribute to social justice in the greater Omaha community and beyond.



## Reducing the Use of Fossil Fuels: the Diocese of Monterey - United States of America

The diocese of Monterey is involved in two initiatives to reduce the use of fossil fuels.

The first one, called "Green Diocese", aims at reducing the diocese's carbon footprint by reducing energy consumption and meeting energy needs with solar power wherever possible. In 2016, the diocese began a partnership with Greenpower, a subsidiary of the Romero Institute, a faith-based non-profit law and advocacy center. Bishop Richard Garcia sent a letter to the clergy of the diocese, urging them to welcome Greenpower to speak to parishioners, help conduct energy assessments, and coordinate work with solar companies. The need for electricity (and consequently the need to pay for electricity) is being reduced by installing LED lighting, replacing inefficient electrical equipment or water pumps with more modern systems, installing double-paned windows, adding insulation, sealing cracks around doors and windows, and by the overall upgrading of buildings. The diocese is also exploring all the possibilities to convert its buildings (46 parishes and 18 schools, as well as various other pastoral facilities) to solar energy, and many parishes have established "Green Teams".



Solar panels on the roof of Saint Michael's parish



Parish Greenpower meeting, with the bishop present (back left of photo)

In the second initiative, the diocese is advocating with local governments to establish "Monterey Bay Community Power": a non-profit, community-owned electric power utility that will use solar and wind power to provide a large part of the entire community's needs. Profits will be invested in new renewable energy sources to be built locally, so that after 10 years as much as 85% of the energy could come from renewable sources. This initiative has the added benefit of creating jobs within the diocese. Nineteen of 21 local governments in the project area have voted to join this new power utility.

The Diocese, after examining its own carbon footprint and assessing the opportunities for improvement both immediately and in the long term, hopes to be an inspiring model for the whole community. In fact, the sustainable use of energy in the future requires a deep reflection about the governance of energy, especially at local level. The longevity of this effort is supported by many communication actions and by teaching youth about ecology and about the call to protect God's creation.





## Use of biomass and building renovation in Kazakhstan

This project was designed and implemented in order to use, as a source of fuel, the post-harvest agricultural biomass available near the village of Jasnaya Polyana. For this purpose, a big stove was built in 2013 for the parish Holy Mary of Perpetual Help in Jasnaya Polyana (this parish belongs to the Archdiocese of Astana). The biomass (husk) produced by the neighboring agricultural company is burned in the stove.

The local agricultural company TOO Taynsha Astyk uses this oven and three bigger ones for the local heating network. This network heats the local school (more than 200 scholars), the church and the parish house, the cultural center, an administration building and about 60 houses. This system has been working for 4 winters, replacing more than 3000 tons of coal per winter previously purchased for heating.

The stove of the parish was designed and built thanks to the support of Renovabis. Renovabis is also financing renovation works in many buildings belonging to the Catholic Church in Kazakhstan, in order to make those building more energy-efficient.



Building the stove



The school



## Interreligious dialogue

Interreligious dialogue is a new approach on the part of most religions and their leaders. It contributes to peaceful coexistence, and to the development of relations of goodwill and kindness, beyond mere tolerance.

It is a necessary strategy not only for peace, but also for a common action in the protection of creation and in the exchange of cultural achievements. In our pluralistic societies, the respect of personal convictions become a practical way to pursue the common good.

In fact, as Pope Francis explains, "faith convictions can offer Christians, and some other believers as well, ample motivation to care for nature and for the most vulnerable of their brothers and sisters". Moreover, "the ethical principles capable of being apprehended by reason can always reappear in different guise and find expression in a variety of languages, including religious language", and thus enrich the reflections about economics, ecology, governance, policies, education and many other fields. It shall not be forgotten that the majority of people living on our planet declare to be believers. "This should spur religions to dialogue among themselves for the sake of protecting nature, defending the poor, and building networks of respect and fraternity".



An interreligious day of reflection, dialogue and prayer for peace and justice, held in Assisi during the pontificate of Pope Benedict XVI (2011)

The interreligious dialogue takes place at local, national or international level. It includes: encounters of religious leaders and believers; joint statements and advocacy about a wide array of issues; joint study groups for mutual knowledge of the religious traditions and for concerted actions expressing profound solidarity with all the members of human family, especially with the needier persons.

Interreligious dialogue is the way of the future.



Israeli President Shimon Peres and Palestinian President Mahmoud Abbas joined the Pope to plant an olive tree in the Vatican garden together with Orthodox Ecumenical Patriarch Bartholomew. Prayers were recited by Jewish, Muslim and Christian clergy (2014)



Pope Francis meeting with various Christian leaders in Assisi (2016)



Interreligious meeting at the Ground Zero Memorial in New York (2015)

## XII. THE MUSICAL PLAYLISTS INSIDE OUR PAVILION

### THE MUSIC IN THE BEST PRACTICES ROOM

*Cristo è liberazione*, sung by Pope John Paul II, from the album "Abbà Pater". Thanks to Multimedia San Paolo for the authorization. *Lumière du monde (international)*, multilingual hymn of the World Youth Day of Toronto 2002, from the album "Lumière du Monde - The Light of World". Thanks to the John Paul II for Youth Foundation for the authorization. *Baba Yetu* (The Lord's Prayer in Swahili), composed by Christopher Tin and sung by the Soweto Gospel Choir. *Madre de la ternura* (a song dedicated to the Holy Virgin, in Spanish), lyrics by Manuel Rodríguez, music by César Olivares, sung by the Peruvian ensemble Takillakta. Thanks to Takillakta for the authorization.

### THE MUSIC IN THE ARTISTIC ROOM (OR GOLDEN ROOM)

*Sicut Cervus*, a motet composed by Giovanni Pierluigi da Palestrina (16th century), sung during the processions to the baptismal font in occasion of the blessing of the water. *O Sacrum convivium*, a motet on the Eucharist, composed by Cardinal Domenico Bartolucci (1917-2013). Both motets are being broadcasted using versions recorded while Cardinal Bartolucci was directing himself the choir. Thanks to the Foundation Domenico Bartolucci for the authorization. *Inna-l-Malak*, a hymn to the Holy Virgin in Arabic, used in the Liturgy for Easter in the Melkite Church. From the double album "La Passion dans les Eglises Orientales" sung by Sister Marie Keyrouz. Thanks to Sister Marie Keyrouz for the authorization. *Amen Hayr Surb* (Amen Holy Father in Armenian), from the Album "Armenian religious music of Abbot Mekhitar". Thanks to the Armenian Mekhitarist Congregation for the authorization.

## XIII. THE BLOGGERS DAY, BY ROBERTO PAGLIALONGA

On August 31, the Vatican Pavilion at EXPO Astana 2017 organized a special day for Russian and Kazak bloggers.

Russian and Kazak bloggers were involved in a treasure hunt through the EXPO with the task of finding information about

Catholicism, the Catholic Church, the Pope's life, faith and religion presented in other Pavilions (Monaco, Belgium, Argentina...). Upon their arrival, they received a warm welcome and a gift from the Vatican Pavilion staff followed by a special tour of the Pavilion carried out by its Vice-Commissioner, Fr. Guido Trezzani.



Thanks to the social media, the world of bloggers is growing considerably. Their growing presence is due in part to younger generations making use of the internet's potential, particularly in Central and Far East Asia. Bloggers became more influential in public opinion and politics.

The Vatican Section at EXPO Astana was an opportunity to build awareness and foster a better understanding about the Holy Father, the life of the Catholic Church and the international commitment of the Holy See-Vatican City State to the care for the planet, our "Common Home", through topics such as integral ecology, green economy and solar energy.

Roberto Paglialonga,  
Communication Officer of the Dicastery,  
9 November 2022



## XIV. THE “SUNNY KIDS” INSIDE THE EXPO BY FR. GUIDO TREZZANI

In Kazakhstan, children with Trisomy 21 are amicably nicknamed “sunny kids”, because of their often smiling and joyful attitude! I worked with them daily, in the Diocese of Almaty, and can confirm that they are full of energy and vitality.

In many countries, children with Trisomy 21 are often marginalized and stigmatized. Tailored education and specialized medical expertise are almost nonexistent, and their parents do not receive adequate support. Therefore, the social inclusion of the “sunny kids” is a major challenge.

This said, it has been a pleasure to organize a tour of the EXPO 2017 for several of these children and for their families.

After a few refreshments and a warm welcome, our guests visited the Vatican Pavilion and several other pavilions, some of which had interactive exhibitions that the “sunny kids” generally appreciated. The experience was moving and entertaining for their families, and I express my deep gratitude to all those who contributed to make this visit a success.

Let us use all our energy to realize an inclusive society that promotes the dignity of every human.

Let us also find avenues for the “sunny kids” to contribute their energy to our societies.





## **XV. THE INTERRELIGIOUS CONFERENCE 31 AUGUST 2017**

### **PRESENTATION OF THE EVENT**

The interreligious conference "All together for the care of our common home" was organized by the Holy See under the auspices of the Akhimat (Municipality) of Astana and with the support of the German agency Renovabis. It took place in the Palace of Peace and Reconciliation (the famous pyramidal building of Astana) in the afternoon of August 31, 2017. It was attended by numerous members of the Diplomatic Corps in Kazakhstan and believers from various religions.

As the concept note circulated before the Conference explained:

"EXPOs are chiefly fairs dedicated to technology and inventions, 'nation branding', cultural and artistic exchanges. Spirituality and ethical reflection usually do not have a prominent role in such events. However, the topic of the EXPO hosted by the Government of Kazakhstan, namely "Future Energy", is so impelling and interrelated to many critical challenges for the wellbeing of our societies and our planet that it offers a wonderful occasion for meditation and ethical reflection, grounded on spirituality. Indeed, energy is not only an issue for policymakers, investors and scientist, and the numerous issues related to energy cannot be merely assessed and dealt with the lens of technique, efficiency, profit and legality: faith-based convictions also have a word to say in this regard! Religious texts and genuine religious and human values can be a strong motivation to commit to concrete action in favor of our common home, in favor of the whole human family; a strong motivation for improvement, for a better care of natural resources and our planet, including the way we generate, distribute and consume energy.

This is why religious leaders and faith-based speakers, both from international origin and from Kazakhstan are gathered today, having accepted the invitation of the Dicastery for Promoting Integral Human Development. It is hoped that our meeting will focus specially on energy, since it appears that there is a lot to say and to share in this precise field. It is also hoped that the statement which will be issued at the end of the event will be an inspiring legacy of our gathering, in this symbolic venue here in Astana, during EXPO 2017".

After the opening remarks from Cardinal Peter Turkson, from the representatives of the Akhimat of Astana and of the Ministry of Religious Affairs of Kazakhstan, the following speaker took the floor:

1. Supreme Mufti Yerzhan Haji Mayamerov Malgazhyuly, Chairman of the Spiritual Administration of Muslims of Kazakhstan
2. Metropolitan Alexander of the Eparchy of Astana and Almaty
3. Dr. Clare Amos, Anglican Christian, Programme Coordinator for Interreligious Dialogue and Cooperation at the World Council of Churches
4. Rabbi Daniel Sperber, professor of Talmud at the Bar-Ilan University in Israel
5. Imam Yahya Sergio Pallavicini, Ambassador for Dialogue among Civilizations of the Islamic Educational, Scientific and Cultural Organization (ISESCO), and President of the Italian Islamic Religious Community (COREIS)

Msgr. Khaled Akasheh, from the Pontifical Council for Interreligious Dialogue, served as moderator during the Conference.

Finally, a joint statement about "Future Energy" was signed by Cardinal Turkson, Dr. Amos, Rabbi Sperber and Imam Pallavicini.

## THE JOINT STATEMENT ABOUT “FUTURE ENERGY”

*Statement about “Future Energy” by religious leaders gathered in Astana for the interreligious event ALL TOGETHER FOR THE CARE OF OUR COMMON HOME, organized during the EXPO 2017*

31 August 2017

Numerous interreligious statements and gatherings, addressing various aspects of the care of our “common home”, such as climate, water, oceans and forests have been issued in recent years. These initiatives inspire us and many others, demonstrating that, religions and spirituality can give rise to a strong motivation to commit into concrete action in favor of our common home, in favor of the whole human family.

They also remind us that religious values and moral obligations – such as not harming others, having a meaningful existence, solidarity, being fair and just – must shape, in a particular manner, the thoughts and the deeds of all believers – be they politicians or public servants, scientists, investors, entrepreneurs, opinion makers, farmers, teachers, voters, parents or artists – towards increased awareness and the urgency of better care of nature, but also better care of our brothers and sisters, especially the needy, the most vulnerable, whose surrounding environment has been degraded and irresponsibly exploited.

Finally, these initiatives also highlight how religious leaders and believers can collaborate – at international, national, local level – with public authorities, scientific bodies, schools and civil society organizations in promoting the common good, harmony, benevolence and peace.

Today, we religious leaders of different faith traditions, are in Astana to address the challenging topic of “Future Energy”. Indeed, the way energy is generated, transported and consumed is having and will have in the future a significant impact: on nature and ecosystems and thus on access to water and food; on the sustainability of societies, trade and economies; urban and rural areas, as well as oceans; income equity and access to opportunities; human health and wellbeing and, more broadly, human development; conflicts and peace; the effectiveness of international and regional efforts to establish a multilateral governance in order to manage the most complex challenges that affect our common home.

This being said, we recall that energy resources are not created by humans: no one may claim any merit or pride for their existence; no grabbing behaviors are acceptable. These resources have been entrusted by God, the Creator, to us for the wellbeing of the entire human family, for all generations. Therefore, these resources shall not be used indiscriminately. In each context and era, human societies must use the available energy resources only after a careful discernment, examining possible alternatives, assessing the needs, treasuring the information provided by scientist and technicians. We are facing complex situations, characterized by a variety of energy resources and systems, which are at various degrees polluting or clean, more or less easy to control and distribute, renewable or not, object of diverging particular interests. The aforementioned discernment must be inspired by the pursuit of the common good of the whole human family and by the respect for the inalienable human dignity. What is at stake is the meaning of our presence on Earth.

At the end of our gathering:

1. We encourage all believers and persons of good will to nurture ongoing reflection on shared values and on humans' relation with nature. This reflection goes hand in hand with contemplation of nature, and with the feelings that come from that contemplation: wonder, humility, gratitude for the marvels created by God, rejecting the idea that our common home is the result of a meaningless, pure chance. The observation of ecosystems, of human nature and of the whole creation leads to many lessons and wisdom, to an adequate anthropology and a valid ethical framework. This allows us to understand more precisely our place and our role in the whole cosmos, our duties of caring and

respecting creation, or natural orientation towards relationality, sharing and solidarity, the recognition that we are limited and have limits to respect. Parents have a primary role in guiding their children towards contemplation; however, school, religious education and celebrations as well as media can certainly make a positive contribution.

2. We recall the very special place that various natural resources – including resources linked to energy, such as the fire and the flame, the incense, and water – have in many religious traditions, liturgies, texts and celebrations. Natural elements are inspiration and means which can help in linking us with

the Transcendent. In many Faiths and religious traditions, even very ancient, energy is an attribute of divinity, of mighty power and capacity of creation. Hence, it is fundamental to meditate on the significance and relevance of energy resources, and on the fact that humans can use energy for good purposes as well as bad ones, being tempted to trespass limits that shall not be infringed in the fields of human rights, sustainability, bioethics, among others.

3. We recognize that access to energy is a pre-requisite for the fulfillment of many human rights and for the development of persons and communities. Consequently, we call for policies, funding and an effective transfer of technologies and capacities wherever needed, ensuring that, in any context where humans settle, there be access to energy which is clean, safe, reliable and affordable, with the lowest possible negative environmental impact, consistent with local culture, needs and with the related maintenance and governance capacities. While recalling the moral imperative of not harming others, we support an ambitious transition towards non-polluting energy sources and processes, and a reduced dependency from fossil fuels. Such transition must go hand in hand with decentralization and democratization of energy production and access. We suggest that believers and persons of good will should divest from any venture, including energy related-ones, which are not consistent with genuine human and religious values, or, where possible, to challenge the companies and funds in which they invest in order to improve their environmental and social conduct and performance indicators.

4. We appeal to States to reject any large-scale energy project if its environmental and social impacts have not been adequately assessed and the alternative of smaller scale installations using renewable energies not carefully and fully examined, to oppose corruption while always safeguarding the dignity and the rights and the involvement of local inhabitants. The principle of reparative justice, which can be framed as the "polluter pays and restores the situation" shall be applied, always respecting local inhabitants.

5. We appeal to States and financial regulators to prevent irresponsible and cynical speculation on energy resources.

6. We appeal to States, international organizations and energy utilities to avoid any unnecessary dependence on networks, trade agreements, patents or bureaucracy which could hamper a decentralization and democratization of energy in particular the access to energy of the poorest and most isolated – in accordance with the goals of the United Nations Sustainable Energy for All by 2030.



7. We appeal to the business sector as well as to all consumers, not to be led by the mere search for higher short-term profit and for increased consumption levels, and especially to refrain from the massive promotion and production of short-life products demanding a lot of energy for their production and use which are soon outdated or broken and need to be replaced by newer ones, thus reinforcing an unsustainable culture of waste and unbridled consumerism. Long-life products should be preferred, especially when they match high standards in the fields of environmental protection, equal redistribution of earnings, social inclusion, human rights.

8. We reject the production and use of nuclear bombs, and more broadly we are saddened by the amount of energy and natural resources being used to produce and use weapons.

9. We appeal to our religious agents, to the administrators and users of religious buildings including facilities used for training or housing, to improve – where appropriate, while respecting artistic, insulation and safety requirements – the energy consumption patterns of these buildings, as far as possible using energy locally produced from renewable sources, to carefully choose their suppliers, to encourage recycling, water saving and, wherever possible, composting and recycling of wastes.

10. We recommend observance of the various fasting times and increased frugality as prescribed by our respective sacred texts or traditions, not as a mere procedure or as fashion trends, but as an ever-renewed opportunity and privileged moment for personal meditation, prayer and closer relation to God, which can also encompass meditation about the relationship with the others and with other lifeforms. More broadly, a rich spiritual life, nourished by prayer, can provide the motivation needed for change and progress, and commitment for facing problems, having identified their real causes, instead of merely addressing symptoms.

11. We encourage religious leaders in every nation to work together with other sectors of the society, including Governments and policy-makers, in order to shape Future Energy systems really at the service of the whole human family. At the same time, we encourage Governments, policy-makers and business sector to consider positively the particular contribution of religions.

## EXCERPTS FROM SPEECHES

### ***Cardinal Peter Turkson***

"(...) As religious leaders and intellectuals inspired by values stemming from our religious and spiritual heritage, we are not able to offer solutions for problems which need specialists in their field. However, we have a particular and irreplaceable contributions to make about the crises that afflict of our common home and the solutions to them. The first contribution is not far to seek: namely, that of providing a holistic vision of the world, inspired by faith. A second important contribution is one related to the values that should inspire the believer – and really every person of good will – in his relation to the planet, the way of life and the search for solutions, such as,

- the sense of gratitude to God for His gifts, beginning from simpler ones like, air, water, earth, fire, food,
- a sense of moderation in the use of the earth resources,
- a conviction, inspired by the principle of the universal destination of the goods of the earth, to share the earth's resources with all the other members of the human family,
- a sense of inter-generational solidarity which makes us think also about generations to come, and, hence, of the impact of individual choices and styles of life on the entire human family,
- a sense of solidarity, in particular in the case of natural calamities, and the desire and curiosity to continue to explore the mysteries of Creation, with view to discovering new solutions and exercising care for creation.

A concrete engagement in favor of our sick planet and of its resources, in particular energy, could be that of best practices, adopted and made known also in our places of worship and similar spaces. It is with joy that we note the construction - or conversion – of 'green' churches, synagogues and mosques. (...)"

**Rabbi Daniel Sperber**

"(...) The preservation of our natural resources is a concept that permeates biblical and rabbinic thought. Let us consider one simple example, *shem-itah*, the sabbatical year, as it has much to teach us. At a strictly agricultural level, one may not exploit the earth without pause. The soil cannot generate crops year after year without losing its nutrients. You have to let the earth, the soil, rest – "*az tirzeh ha-aretz et shabtotehah*", "then shall the land be paid her Sabbaths" (*Leviticus*, 26:34). We know that in the medieval era, the feudal system divided parcels of land into three fields, one of which was left fallow at any given time. This made for a sort of double *shem-itah*. Similarly it appears that in the Land of Israel in Talmudic times the fields were left fallow once every two or three years, and not merely in the seventh, as we learn from rabbinic sources. The earth has to renew its strength; it has, as it were, to recharge its batteries in order to be able to remain fertile so as to continue to produce crops. At times we may argue that immediate short-term benefits – as a metaphorical example, the use of fruit trees for siege-engines – may justify long term diminution of resources. (See *Deuteronomy* 20:19-20 that one may not cut down fruit trees to make siege-engines.) The immediate and urgent necessity to deal with vast amounts of waste products – nuclear or less volatile – and distance them from population-centers by dumping them in the sea, or burying them in unpopulated areas, may indeed offer attractive, utilitarian, short-term solutions – and usually politically satisfactory ones! However, the long-term effect of pollution, both of seawater and of fresh-water sources constitutes a threat to future life, and the momentary benefits of our generation – i.e., the immediate "siege benefits" – must in no way jeopardize our progeny's ability to eat "the fruit of the trees", (*ibid.* 19).

Thus, the principle of *ba'al tashit* touches upon the most basic mandate of the conservationist – the absolute prohibition of wasting our natural resources. (...)"

**Imam Yahya Pallavicini**

"We pray that the "future energy," which is the title of this Expo 2017 in Astana, is represented and well guarded by the young Jews, Christians, and Muslims of Kazakhstan and in the rest of the world, responsible and conscientious inheritors of this world's patrimony and sensitive to the Principal and the Origin of the Universe, and the sacred presence of God who created the heavens, the earth, and mankind in the "image of the Merciful".

Our witness of the presence of God in the world, *al-sakina* in the Islamic tradition, *shekinah* in the Jewish one, depends on the blessed connection between youth, common home, and future energy. There is no other "energy" or other "home" where mankind can find refuge: only the remembrance of this religious dependency will save the believers from the illusion of an alternative in which the earth is betrayed, God is forgotten and man lost in his pride and his ignorance.

To respect the "common home" means recognising the One Creator who makes us live with our families in various cities of the world, but it also means that we must remember that the Same Creator lives in the residence of our hearts where He inspires thoughts and actions allowing us to be good people, capable of loving God and our neighbours, loving the Sacred House and the common home.

In these days millions of Muslims are carrying out the ritual of pilgrimage to Mecca, millions of men and women, old and young, of all cultures and nationalities visit the House of Allah and they stop at the station of the prophet Abraham where his footprint bears witness to his loyalty and the effort made in the construction of a Temple for the One God. The prophecy of Abraham and the Monotheism that is common to the Jews, Christians and Muslims are a pillar of our common home and of the spiritual economy of our three communities.

In Jerusalem, like in Rome, like in Astana, there is a recognition and respect for this common home, thanks to the youth who will know how to renew the energy of faith into something Superior and Profound; civilizations will know how to develop and collaborate in the preservation and transmission of a science of Truth and Peace."



**Dr. Clare Amos**

"(...) let us look at God through such a trinitarian lens – and ask what insights we can draw forth.

First God as creator, or in traditional trinitarian language God the Father. Christian tradition has seen this particular aspect or 'person' of the Trinity as the source and originator of creation. The biblical creation narrative, particularly as it is expressed in Genesis 1, has had a profound influence on our thinking about the nature, process and well being of creation. Although it clearly suggests that human beings are the crown of creation – the very length of the chapter and the delayed process in reaching the creation of humanity suggests that all creation, the non human and even non sentiment parts of creation have value and importance in the sight of God. It is not only human beings that, according to this narrative, are blessed by God. It seems to me that this carries the implication that energy policies must not simply be about the well being of all humanity, vital though that is. Our energy policies need to take account also of the well being of the wider creation. This is reinforced for me when I read the Book of Job... in particular the challenge flung at Job by God in chapters 38 and 39 where the wildness of creation and the inability of human beings to fully comprehend it let alone control it is reinforced again and again.

4 'Where were you when I laid the foundation of the earth? Tell me, if you have understanding.

5 Who determined its measurements—surely you know! Or who stretched the line upon it?

6 On what were its bases sunk, or who laid its cornerstone

7 when the morning stars sang together and all the heavenly beings<sup>\*</sup> shouted for joy? (...)

12 'Have you commanded the morning since your days began, and caused the dawn to know its place,

13 so that it might take hold of the skirts of the earth, and the wicked be shaken out of it? (...)

16 'Have you entered into the springs of the sea, or walked in the recesses of the deep?

17 Have the gates of death been revealed to you, or have you seen the gates of deep darkness?

18 Have you comprehended the expanse of the earth? Declare, if you know all this.

19 'Where is the way to the dwelling of light, and where is the place of darkness,

20 that you may take it to its territory and that you may discern the paths to its home?

There is a tremendous energy – that is indeed the right word – in these words, but it is energy that Job – and we can only glimpse at. It speaks to me of the need for human beings to learn a proper humility. (...)"

### ***Metropolitan Alexander***

"(...) We should not be afraid that the Church will be engaged "not in its own business," because the Church is first and foremost people who can and should be engaged in various good deeds, including solving environmental problems and protecting the environment. The Orthodox Church, realizing its responsibility for the fate of humanity, cannot remain detached from the pressing problems of our time.

The great Russian philosopher S.L. Frank speaks of the task of Christians in the following way: "The uplifting common goal and value of Christian life - the kingdom of God and its truth - is divided into two tasks: along with the pursuit of salvation, redemption and theosis of the world, we must guard human existence itself and, with that, the existence of the world of which man is a part..."

Therefore, the Church's most important area of concern becomes the field of ecology. At the root of the ecological problems that have risen sharply before humanity in the 21st century is the sin of the first men.

The apostle Paul states, "The creation submitted itself to vanity, not willingly, but according to the will of him who submitted it, in the hope that the creation itself would be delivered from the bondage of decay into the freedom of the glory of the children of God. For we know that the whole creation groans and suffers together in pain until now. (Rom. 8: 20, 22).

From these words it is clear that nature itself bears the mark of man's sin, even though it retains the original mark of divine harmony.

One of the most serious consequences of sin is the rupture of man's organic unity with the world around him. First of all, it is expressed in the dominance of the selfish and consumerist attitude toward nature. The Church

contrasts a responsible, caring and reverent attitude toward the surrounding reality as God's creation with such a sinful approach.

According to the thought of St. John Chrysostom, "man is only a 'ruler,' to whom the riches of the lower world are entrusted. This wealth - "air, sun, water, earth, sky, sea, light, stars" God "divided it among all equally, as among brothers..."

All the Church Fathers reason in a similar spirit. Unfortunately, this precept of the Christian patristic tradition is completely ignored by modern man. The consequence is environmental pollution, the depletion of irreplaceable natural resources, the disappearance of rare species of plants and animals, the destruction of unique natural resources, the disappearance of unique natural monuments, the accumulation of harmful substances in the atmosphere, and so on. There is a global climate change on the planet, the question of humanity's global survival arises..."



The speech of Metropolitan Alexander of Kazakhstan.



Imam Pallavicini and Dr. Amos signing the joint statement.



Cardinal Turkson signing the joint statement.





Rabbi Sperber signing the joint statement.





Musical entertainment during the event.

## **XVI. THE MESSAGE ON THE OCCASION OF THE WORLD DAY OF PRAYER FOR CREATION**

The Message was signed by Pope Francis and Ecumenical Patriarch Bartholomew. Cardinal Peter Turkson read it in front of the Pavilion of the Holy See, inside the EXPO.

The story of creation presents us with a panoramic view of the world. Scripture reveals that, "in the beginning", God intended humanity to co-operate in the preservation and protection of the natural environment. At first, as we read in Genesis, "no plant of the field was yet in the earth and no herb of the field had yet sprung up – for the Lord God had not caused it to rain upon the earth, and there was no one to till the ground" (2:5). The earth was entrusted to us as a sublime gift and legacy, for which all of us share responsibility until, "in the end", all things in heaven and on earth will be restored in Christ (cf. Eph 1:10). Our human dignity and welfare are deeply connected to our care for the whole of creation.

However, "in the meantime", the history of the world presents a very different context. It reveals a morally decaying scenario where our attitude and behaviour towards creation obscures our calling as God's co-operators. Our propensity to interrupt the world's delicate and balanced ecosystems, our insatiable desire to manipulate and control the planet's limited resources, and our greed for limitless profit in markets – all these have alienated us from the original purpose of creation. We no longer respect nature as a shared gift; instead, we regard it as a private possession. We no longer associate with nature in order to sustain it; instead, we lord over it to support our own constructs.

The consequences of this alternative worldview are tragic and lasting. The human environment and the natural environment are deteriorating together, and this deterioration of the planet weighs upon the most vulnerable of its people. The impact of climate change affects, first and foremost, those who live in poverty in every corner of the globe. Our obligation to use the earth's goods responsibly implies the recognition of and respect for all

people and all living creatures. The urgent call and challenge to care for creation are an invitation for all of humanity to work towards sustainable and integral development.

Therefore, united by the same concern for God's creation and acknowledging the earth as a shared good, we fervently invite all people of goodwill to dedicate a time of prayer for the environment on 1 September. On this occasion, we wish to offer thanks to the loving Creator for the noble gift of creation and to pledge commitment to its care and preservation for the sake of future generations. After all, we know that we labour in vain if the Lord is not by our side (cf. Ps 126-127), if prayer is not at the centre of our reflection and celebration. Indeed, an objective of our prayer is to change the way we perceive the world in order to change the way we relate to the world. The goal of our promise is to be courageous in embracing greater simplicity and solidarity in our lives.

We urgently appeal to those in positions of social and economic, as well as political and cultural, responsibility to hear the cry of the earth and to attend to the needs of the marginalized, but above all to respond to the plea of millions and support the consensus of the world for the healing of our wounded creation. We are convinced that there can be no sincere and enduring resolution to the challenge of the ecological crisis and climate change unless the response is concerted and collective, unless the responsibility is shared and accountable, unless we give priority to solidarity and service.

From the Vatican and from the Phanar, 1 September 2017

## XVII. THE NATIONAL DAY OF THE HOLY SEE, 2 SEPTEMBER 2020

### PRESENTATION OF THE EVENT

The National Day of the Holy See was preceded by a press conference in the EXPO Media Center on the eve, September the 1<sup>st</sup>, and celebrated on the National Day Stage of the EXPO site, during the afternoon of September 2<sup>nd</sup>, 2017.

Cardinal Peter Turkson, Apostolic Nuncio Francis Chullikatt, several Bishops from the Catholic Church in Kazakhstan and a delegation from the Vatican (including staff from the Dicastery for Promoting Integral Human Development, from the Pontifical Council for Interreligious Dialogue and from the Secretariat of State) participated to the National Day. Many faithful and clergy from Astana also came in the EXPO for this event.

The host country was represented by Mr. Kassym-Jomart Tokayev, Chairman of the Senate of the Republic of Kazakhstan (in 2019 he became President of the Republic of Kazakhstan).

After the speeches of Cardinal Turkson and Mr. Tokayev, Archbishop Peta read a special Message from Pope Francis. Father Guido Trezzani announced that an energy-related legacy project would be financed and implemented in Kazakhstan by the Catholic Church after the EXPO. Moreover, the talented Catholic Choir "Soli Deo Gloria" from Novosibirsk (Russia) performed several songs from its repertoire after each of the aforementioned panelists.

In the meantime, hardcopies of the encyclical *Laudato si'* were distributed – in several languages – to the visitors nearby the Stage.

At the end of the celebration on Stage, a bilateral delegation visited the Pavilion of the Holy See and finally the Pavilion of Kazakhstan. The visits were followed by two official receptions: an official dinner organized by the host country, and a reception organized by the Holy See during which the participants were addressed by the Apostolic Nuncio Mons. Francis Chullikatt.





## THE MESSAGE OF POPE FRANCIS

Your Eminence  
My Brother Bishops,  
Esteemed Authorities,  
Dear Brothers and Sisters,

I offer a warm greeting to all those taking part in the National Day of the Holy See at Expo 2017 in Astana. My greeting also goes to all who have helped in various ways with the planning and realization of this event, and to the many visitors in attendance.

I am pleased that Kazakhstan is hosting this International Exhibition devoted to the theme: "Future Energy". Serious and responsible reflection is demanded on how mankind can, in coming years, draw on innovative technologies to make wise use of the energy resources that are our common legacy. We are all conscious of the fact that our use of those resources is critical for the health of our world and the welfare of our societies, a welfare that needs to be viewed in integral terms, and not simply as economic prosperity or greater capacity for consumption. We must act now to ensure that energy is used to improve our lives and to cause our human family to flourish, for by nature we are called to fruitful interaction, solidarity and love.



For this reason, energy resources must not be allowed to fall prey to unscrupulous financial speculation or to become a source of conflict. This calls for broad-ranging and frank dialogue on all levels and among different sectors of our societies. "Future energy" does not have to do with researchers, technicians and investors alone; it also represents a challenge to the worlds of culture, politics, education and religion. I gladly recall the growth of dialogue and cooperation between religions that has taken place in Kazakhstan, a land characterized by rich ethnic, cultural and spiritual traditions. It is my hope that the different religions will take part in this dialogue, for their writings contain insights that "prove meaningful in every age; they have an enduring power to open new horizons... The ethical principles capable of being apprehended by reason can always reappear in different guise and find expression in a variety of languages, including religious language" (*Laudato Si'*, 199). It is important for all of us to discover in our own religious traditions the inspiration and criteria that foster a courageous commitment to perseverance in bettering our relations and in living together as brothers and sisters.

The way we use energy resources is a sign of how well we are carrying out the task that, according to many religious traditions, has been entrusted to us by God, namely to care for the world around us and for our fellow human beings of every time and place. If our generation and use of energy are sustainable and grounded in solidarity, we are doing our job well. Otherwise, we are not. At stake is our very dignity; at stake too are justice and peace. It is to promote an awareness of this that the Holy See has designed its pavilion at the Astana Expo on the theme: "Energy for the Common Good: Caring for our Common Home".

May Almighty God, the Creator, grant that Expo 2017 provide timely lessons and lasting inspiration, and may he bless our common efforts to bring them to fruition.

From the Vatican, 2 September 2017

## SPEECH FROM CARDINAL PETER TURKSON

Dear Senator Kassym-Jomart Tokayev, Chairperson of the Senate of the Republic of Kazakhstan, Your Excellency Archbishop Francis Chulikatt, the Apostolic Nuncio to Kazakhstan, Your Excellencies: Members of the Diplomatic Corp, My Lord Archbishop and Bishops of the Catholic Church in Kazakhstan, the Metropolitan Archbishop and Bishops of the Orthodox Church, Chief Imam, Distinguished Members of the Expo. Planning Committee, Distinguished Staff and friends:

Let me first thank the President and People of the Republic of Kazakhstan for the kind invitation to the Vatican to participate in this International Exhibition on "Future Energy". The Holy See/Vatican is heartily grateful for the invitation, and also avails itself of the opportunity to congratulate the Republic of Kazakhstan warmly on the 25<sup>th</sup> anniversary of its *Diplomatic Relations with the Vatican*, and on its *National Day of the Constitution* a few days ago.

What a privilege it is for the Holy See/ Vatican to have another opportunity, at this Expo on Future Energy, to relive its mission of accompanying the human family in its aspirations for integral human flourishing and its search for the resources which make this possible, such as *energy, in its known forms*, as well as its *unknown, and hence, future forms* which inspire, animate and orient our research and reflection.

Indeed, when the Vatican participated at the Great Expo in London (1851), it was, as at the current Expo, to join the family of nations in their search for solutions to the challenges of human flourishing. Similarly, when the Vatican participated again at the Expo in Zaragoza (2008), it was to address the issue of "*Water and sustainable development*". Lately, at the Expo in Milan (2015) with the theme: "*Feeding the planet, energy for life*" the Vatican again joined the nations of the world to showcase ideas and innovative ways of feeding the world. And, even before the present Exhibition ends in the next few days, the Vatican is already gearing up for the next Exhibition in Dubai (2020).

Indeed, the Vatican, as a Church-State, cannot stay away when the world and the human family comes together to connect minds in order to create the future. When Expos are global destination of thousands and millions to share ideas and to showcase innovation, to celebrate human creativity, and partnership for development, the Vatican cannot miss out; for, again as a Church-State, there can be no better way of showing affection for the human family and solidarity with it about its problems and aspirations than to enter into dialogue with it about all its experiences in its march through history.

Therefore, the Vatican considers these EXPOs privileged moments of serving the human family, of which she is a part, but for which she has the light of revelation for its education and enrichment.

At this International Exhibition in Astana on "*Future Energy*", the Holy See, in its pavilion, tells a very simple story of *energy* in the life of the human person: At creation *Energy, in the form of light, accompanied the origins of human life on earth. Pope Benedict identified this form of energy also as the power of love.* The story continues to look at the ambiguous experience that humanity makes of energy, good uses and bad uses. Trusting in humanity's basic instinct for goodness, made possible and real by the *light of God's grace that shines on our hearts to make us reflect His glory among men*, the Vatican pavilion showcases some instances of the use of energy for improved living conditions. The Vatican pavilion concludes with the mention of a form of *energy which is common to all of us, and does motivate and orient us in all we do.* This is *spiritual energy*. It is energy within all of us as *a force/power for good*; and it is generated and nourished by our own exposure to the good, ultimately, to the God of goodness through prayer and meditation. If *energy* is not simply the product of mass and velocity, but also the *capacity for action/work*, then one can also talk about the *energy* that stimulates us and moves us from within to care for one another, to commit to the wellbeing and flourishing of humanity, and to care for the earth our common home. One can then talk about the *spiritual energy* that moved Mother Theresa of Calcutta to see dignity in the poor and to always seek a better way of serving them. One can think about the force that energized Mahatma Gandhi and Nelson Mandela as *servant leaders* of their people.

To date, the Vatican has been able to share its narrative about *future energy* with thousands of visitors to its pavilion. But, the Holy See could share its modest story about *energy*, thanks to so very many collaborators: the Commissioner of the Expo and his team, that approved our narrative, the company that helped, with the design of pavilion, to convert our story into a visual reality to be experience, the local staff that exercised oversight over the various stages of the project execution, the very wonderful pavilion attendants who helped visitors experience our story, and to all of you: Government and people of Astana for your warm and gracious hospitality.

May God bless you all and make the visions and stories told at this EXPO become real for your Government and its people!

## THE REPERTOIRE OF THE CHOIR

*Veni Emmanuel* (Philip Lawson)

*Omni Die dic Mariae* (Grzegorz G. Gorczycki)

*Christus natus nobis* (Wolfgang Amadeus Mozart)

*Sub tuum praesidium* (Sergii Movchan)

*Ubi caritas et amor* (Ola Gjeilo)

*Ave verum* (Anthony Zerillo)

*Dignare* (Georg Friedrich Händel)

*Panis Angelicus* (Claudio Casciolini)











Mr. Kassym-Jomart Tokayev and Cardinal Peter Turkson.





Visiting the upper part of the Kazakh spherical pavilion.

It is a big honour and  
pleasure to visit Vatican's  
pavillion at EXPO-2017.  
This year we mark the 25th  
Anniversary of the establishment  
of diplomatic relations. Good event!  
We also deeply appreciate the  
active participation and support  
of Vatican at EXPO-2017  
Thanks a lot and best wishes!  
Gumil!

Jonacely  
2/9-2017

The message handwritten by Mr. Tokayev while visiting the Vatican Pavilion.

## **XVIII. THE CONFERENCE WITH THE NAZARBAYEV UNIVERSITY**

### **PRESENTATION OF THE EVENT**

The Conference "Energy for our Common Home" was organized by the Dicastery for Promoting Integral Human Development with the Nazarbayev University of Astana, with the support of Siemens and of the German agency Renovabis. It took place in the Public Policy and Business School of the Nazarbayev University in the afternoon of September 3, 2017.

As the concept note circulated before the Conference explained:

"In many ways, during EXPO 2017, we are incited to think about "Future Energy". This requires an interdisciplinary approach, since the various challenges pertaining to energy are interconnected and simultaneous. Below is a partial list of these challenges:

- the pollution resulting from the extraction and use of fossil fuels and other forms of energy, or resulting from the waste management, e.g. nuclear waste;
- the lack of adequate energy in many remote areas or poor contexts;
- the energy demand in the most developed societies seems destined to increase indefinitely, in a trend of consumerism and waste culture;
- the effects of the price volatility of fossil energy on the production of food and on the access to food, and more broadly the effect of irresponsible speculation on energy resources;
- the geopolitical tensions arising from the control and the subsequent exploitation of some energy reserves;
- the search for indicators and criteria of reliability, aimed at setting up new systems based on the use of energy which is more clean, safe, affordable, managed in an equitable manner;
- the unjust and unequal sharing of energy resources and of the sale proceeds;



- the impossibility of imposing in a top-down way a universal and abstract model of energy development, since the future energy of each country or region must take into careful consideration the local conditions in an integral approach;
- the access by the largest possible number of people to the most suitable technologies for their context of living.

These and other challenges need to be faced with determination, identifying the deep root of problems and facing them, instead of merely trying to address the symptoms caused by the problems. Hence, the objectives of the conference are:

- contribute to set the energy question within a wider vision of development;
- avoiding to repeat the strategies which come from the "comfortable position of a high level of development and a quality of life well beyond the reach of the majority of the world's population" as wrote Pope Francis, and at the same time shelving limited analyses and lines of argument that only pursue technical-economic feasibility and disregard solidarity and justice;
- show that energy can, and therefore must, be managed as a key factor for development and peace;
- provide judgment principles and criteria accessible to all, along with some concrete proposals for the harmonious management of energy;
- offer a privileged time of exchange and reflection between high-skilled professionals and the University, chiefly its students, in occasion of the Holy See (Vatican) participation in the EXPO 2017. The challenge for these students is becoming aware and responsible adults, having an integral vision about the numerous challenges posed to our common home by the issues related to future energy."

## PROGRAMME

### 4:00 Opening of the conference

#### Opening remarks

Prof. Adesida Ilesanmi, Provost of the University

Mr. Norimasa Shimomura, UN Resident Coordinator and UNDP Resident Representative in Kazakhstan

#### Setting the context

Mr. Dias Dosmagambet, 4<sup>th</sup> year student of Electrical & Electronic Engineering, School of Engineering, Nazarbayev University, *National Electricity grid system and electricity generation in Kazakhstan. Current situation, challenges and future*

Ms. Aidana Daulbayeva, 4<sup>th</sup> year student of Electrical & Electronic Engineering, School of Engineering, Nazarbayev University, *Alternative Energy*

### 4:30 First panel - Subsidiarity: small projects having big impacts

Panel moderated by Mr. Tebaldo Vinciguerra, Official of the Dicastery for Promoting Integral Human Development

Mr. Johannes van de Ven, New ways of doing business

Ms. Huda Jaffer, Expert from Selco (India), *Adapting to local challenges*

Mr. Mattias Kiefer, environmental delegate of the Archdiocese of Munich and Freising (Germany), *The challenge of appropriation and partnerships*

Time for discussion and short break at the end of the discussion

### 5:30 Second panel - Supplying energy in a sustainable way

Panel moderated by Prof. Mehdi Behgari, Assistant Professor, Electrical & Electronic Engineering, School of Engineering, Nazarbayev University

Mr. Alexander Sintsov, Siemens - head of Power and Gas Division in Kazakhstan, *Supply, buildings, savings: a complex vision of energy*

Ms. Natalia Alexeeva, Head of UNEP Central Asia Office, *Institutional support to sustainable energy*

H.E. Arturo Fournier Facio, Ambassador of Costa Rica to the Russian Federation, *Costa Rica : Successful experience with renewable sources*

Time for discussion

### 18:30 Wrap-up of the conference

Time for discussion

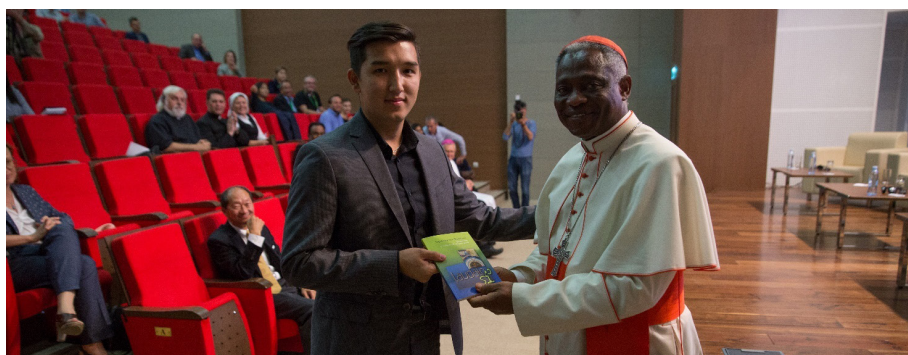
Concluding keynote: An integral vision on human development, care for our common home, and energy, by Cardinal Peter Turkson



President Shigeo Katsu, Nazarbayev University.



Panelists and organizers.



Donating a copy of the encyclical *Laudato si'*.

## XIX. REMARKS ABOUT “FUTURE ENERGY” FROM A REPRESENTATIVE OF OUR SPONSOR SIEMENS, ENG. FEDERICO GOLLA

The view we have about “Future Energy” comes from the past. The past has changed the way to look about energy because -until the last two to three decades- energy was just a movement of electrons producing energy and being dispatched around the world. Today we discover some sources which have been built together with the creation of the planet like the wind or the sun or the water and we are using what we call renewables to have a different way to utilise energy in terms of production and in terms of smart distribution.

The big challenge is saving the energy for the planet, not consuming too much, and reducing the costs for energy which means energy for everybody.

(Excerpt from an interview released by Eng. Golla while visiting our pavilion)



## **XX. REMARKS ABOUT “FUTURE ENERGY” FROM MS. HUDA JAFFER, A REPRESENTATIVE OF OUR SPONSOR SELCO, AND FROM MR. JOHANNES VAN DE VEN, EXECUTIVE DIRECTOR OF THE GOOD ENERGIES FOUNDATION**

One of the largest global gatherings of the year 2017, which did not get the deserved attention in the global media, was the International EXPO on Future Energy held in the Kazakh capital Astana. At the Expo, nations showcased the latest state-of-the-art technologies, disrupting our addiction to fossil fuels.

The key question at the 2017 EXPO was “How do we ensure safe and sustainable access to energy for all while reducing CO2 emissions?” A total of 115 countries and 22 international organizations focused on the future of energy, innovative and practical energy solutions and their impacts on humanity.

Almost all pavilions were technology-centered and energy-supply driven. At the heart of the EXPO was the largest spherical construction in the world, partially covered with photovoltaic panels and two soft-running wind turbines. This itself was an energy disruption as the host nation Kazakhstan and its 20 years old capital Astana is built on the revenues of dirty fossil-fuel and uranium extractions. Most exhibits were packed with the latest solar, wind or battery technology. Russia's Pavilion focused on nuclear-powered ice-breakers to open up the Arctic. China's Pavilion focused on its artificial mini-sun nuclear fusion technology. The United States' Pavilion highlighted the American ingenuity and role of garages in technologic breakthroughs: from solar-powered mobile phones to a flashlight powered by the heat of the hand. The excitement on going nuclear, explore the Arctic or hide in a garage, however seem to be missing the point on distorting the message of the future of energy.



Among the few pavilions that brought forward the human aspects of energy was the Vatican Pavilion. The theme of the Pavilion enabled the audiences to realize that sustainable energy is critical to the future of mankind. It made clear that energy inclusion is a precondition to integral human development. The Vatican Pavilion also challenged the present unsustainable growth model, throw-away culture and unchecked consumerism.

The Vatican Pavilion partnered with SELCO Foundation to showcase different interventions that enable energy inclusion of the poorest, such as a solar powered computer lab in a bus, maintained by Don Bosco in South India, that would travel from one under-served school to another ensuring elevated quality of computer education. The Pavilion also showcased a SELCO solar powered sewing machine that increase income for tailors and a solar powered projector embedded with high quality educational content that drastically improved the standard of education in rural and tribal schools.

These interactive demonstrations educated the visitors of the pavilion on the benefits of sustainable energy in underserved households across the world. It directly connected the interventions to better health, education and overall quality of life.

“All humans are responsible for contributing to the world's energy”, reminds the Vatican Theme statement, a conceptual document specially prepared for the EXPO 2017. The exhibitions in the pavilion included short term experiences as well as multi-secular experiences,... projects managed by the Church in highly industrialized countries as well as in poor areas,... projects on a small or very large scale. That is: enabling people and make them responsible actors. We shall not adopt an abstract insight of “development” or of “future energy”, which could lead to a misleading standardized vision of development, according to which some same model or technology could be exported anywhere else, ignoring the specificities of any local context, ignoring the of local population instead of making them the protagonists.

The Vatican Pavilion was inspired on the encyclical letter *Laudato Si'*, promulgated by Pope Francis in 2015. This visionary statement has been influential is the adoption of the Sustainable Development Goals and the Paris Climate Accord later that year. *Laudato Si'* aptly points to and elaborates on the fact that poorer nations are ill-prepared to adapt to the effects of climate change and will bear the brunt of its effects. Furthermore, it links the issues of poverty and the environment to cut across boundaries of coun-

tries, religions and power structures. The encyclical stress that "there is an urgent need to develop policies so that, in the next few years, the emission of carbon dioxide and other highly polluting gases can be drastically reduced, for example, substituting for fossil fuels and developing sources of renewable energy."

The Vatican also brought to fore the importance of working together by hosting an Inter-religious dialogue that was attended by heads and experts of different regions in Kazakhstan. Leaders of different faith traditions address the topic of "Future Energy". It was acknowledged that the way energy has been generated, transported and consumed in the past and currently will have a significant impact in the future specifically on nature and ecosystems.

The complexity of solving poverty and climate change was debated and some of the critical points that were agreed by all religious leaders: encourage all individuals of good will to nurture ongoing reflection on shared values and on humans' relation with nature; recognizing that access to energy is a pre-requisite for the fulfillment of many human rights and for the development of persons and communities; appeal to states, international organizations and energy utilities to avoid any unnecessary dependence on networks, trade agreements, patents or bureaucracy which could hamper access to energy of the poorest and most isolated; encourage religious leaders in every nation to work together with other sectors of the society to shape Future Energy systems for the service of the entire human family.

A third event in which we participated was a conference organized by Vatican Dicastery for Promoting Integral Human Development in collaboration with the Nazarbayev University of Astana. The conference concluded that the following issues deserves urgent attention among policy makers, public and private sector leaders and philanthropists: diminish the pollution resulting from the extraction and use of fossil fuels and other forms of energy, or resulting from the waste management, e.g. nuclear waste; improve access to adequate energy in many remote areas; diminish a trend of consumerism and waste culture in energy demand in the most developed societies; reduce the effect of irresponsible speculation on energy resources and the price volatility of fossil energy on the production of food and on the access to food; address the root causes of the geopolitical tensions arising from the control and the subsequent exploitation of some energy reserves; promote and advance new systems based on the use of energy which is more clean, safe, affordable, managed in an equitable

manner; promote a more just and equal sharing of energy resources and of the sale proceeds; take into careful consideration the local conditions for energy sources in each region; promote energy access for the largest possible number of people to the most suitable technologies for their context of living; show that energy can, and therefore must, be managed as a key factor for development and peace; provide judgment principles and criteria accessible to all, along with some concrete proposals for the harmonious management of energy.

Only by seriously addressing these pressing issues from an integral ecology perspective will lead to a better future for our common home. The Vatican Pavilion, the Interfaith Dialogue and the Nazarbayev University are steps in that direction. The upcoming EXPO in Dubai, which will focus on Sustainable Innovation, will be an opportunity to put “energy access for our common home” more prominently on the agenda. We at SELCO and Good Energies believe that sustainable energy access for all is a pre-condition for integral human development and for peace.

22 January 2021



## XXI. THE LEGACY PROJECT: A GREEN HOUSE IN “THE ARK VILLAGE” IN TALGAR

After the conclusion of the EXPO, in 2018, the Holy See decided to fund the construction of a greenhouse in the diocese of Almaty (southern Kazakhstan), precisely inside “The Ark Village” in Talgar. With the support of Caritas, this Village offers accommodation, basic healthcare, medical rehabilitation, training and more broadly a family atmosphere to approximately 60 orphans, many of whom have disabilities, and children from families at risk. The work done in the Village offsets the expenses for the whole initiative.

In 2019, an 180 square meters greenhouse equipped with drip-irrigation, illumination, heating and ventilation was constructed.

A part of the produce from this greenhouse supports the beneficiaries of the local Caritas and the proceeds from the sales of the remaining part are used to sustain the Village. The children from the Village are involved in the greenhouse - caring for the fruits - and partnerships are underway to continue to support this project with technical expertise.



## XXII. CONCLUDING REMARKS FROM ARCHBISHOP TOMASH PETA

The International Exposition in Astana (10.06. – 10.09.2017) with the participation of the Holy See was a great event for our local Church.

Many visitors of the Vatican pavilion were asking with surprise, why the Catholics were here at the Exposition, which deals with the "Energy of the future". They were even more surprised when they were told by the guides of the pavilion of the Holy See, that the Vatican always participates in the World Expositions, beginning with the first ones which took place in London and in Paris in the middle of the 19th century.

The topic «Energy of the future» was presented in the pavilion of the Holy See from the spiritual point of view. There was presented the Divine creation of the world as a source of any energy. There was indicated also the prayer as a tool of obtaining true energy, i.e. of Divine grace and love. One can say that the Vatican exposition was an event for evangelization and catechization.

An important element was the commemoration of the state visit of Pope Saint John Paul II in Kazakhstan in 2001. That visit became a historical one. It brought many fruits for the Church as well as for the entire Kazakhstan. The memory of this visit remained in the hearts of all inhabitants of the country of the "great steps".

The presence of the Vatican at the EXPO-2017 was received by the authorities of Kazakhstan with great interest and joy. This was demonstrated by the presence of high ranking representatives of the Government at the celebration of the "National Day of the Vatican at the EXPO-2017" on September 2nd 2017. Furthermore, the message of Pope Francis which was read during the celebration of the National Day was received as well with great gratitude.

Significant is also the circumstance that the Holy See tried from the beginning of its exposition in Astana to engage in this work also the local Church. We experienced benevolence and a spirit of cooperation from the part of His Eminence Cardinal Peter Turkson, the responsible author-



ity for the Vatican pavilion, and also from all his collaborators. As a sign of attention towards the Catholics of Kazakhstan was the consent of the Holy See to present in the Vatican pavilion the altar «Star of Kazakhstan» from our National Shrine of "Mary Queen of Peace" located in Ozyornoye. Its presence at the EXPO-2017 in Astana would have been a beautiful sign of the significance of the prayer in the life of the Church and of the society. Unfortunately, we had to confront later the fact that out of technical reasons we could not bring the altar to the capital.

It is a cause of joy that the events EXPO-2017, which took place in the pavilion of the Holy See, are kept in this memorial book. By this way, the good which happened in our country during three months, will have its continuation.

+ Archbishop Tomash Peta  
Metropolitan Archbishop of Astana

5 February 2018



Thanksgiving mass celebrated in the Cathedral of Astana.



The Russian Catholic Choir "Soli Deo Gloria" performs after the mass.

## XXIII. ACKNOWLEDGEMENTS

The heartfelt gratitude of His Eminence Cardinal Peter Turkson goes to:

- The Bishops of Kazakhstan, the Catholic Church in Kazakhstan and its organizations, the staff and the parishioners of the Archdiocese of Astana, with a special appreciation for the commitment of Guido Trezzani
- The Nuncio and the staff of the Apostolic Nunciature in Kazakhstan
- The staff and the volunteers of our Pavilion who welcomed our visitors
- The Russian Catholic Choir "Soli Deo Gloria" from Novosibirsk
- The staff of MCI, NUSSLI and Act with Art involved with the design, building and maintenance of our pavilion
- 3rd Floor Communications
- Our sponsors: Caritas, the Mc Grath Institute for Church Life of the University of Notre Dame, SELCO, Siemens, and Renovabis
- The liaison staff in the Embassy of Kazakhstan to the Holy See and in the EXPO Company
- The Nazarbayev University of Astana
- Interfax Almaty
- The staff of the Dicastery for Promoting Integral Human Development
- CAFOD, the Vatican Observatory, the Public Library of Dijon, the Einsiedeln Abbey, the Archdioceses of Calcutta and Monreale, the Diocese of Monterey, Creighton University, the Vatican Governorate, the Vatican Television Center, the Osservatore Romano photographic service, the State Tretyakov Gallery of Moscow, the Photographic archive of the Sacred Convent of St. Francis in Assisi for the material supplied and/or the copyrights granted for the Pavilion
- The panelists of the Interreligious Conference and of the Conference "Energy for our Common Home" (they have been mentioned earlier)

- Lia Beltrami, Nicola Cappiello, Antonio Coretti, Heitor Scalabrini Costa, Stanisław Jaromi, Kassym-Jomart Tokayev, Rapol Zhoshybayev for their support
- Khaled Akasheh, Guy Consolmagno, Pasquale Iacobone, Tullio Pagano, Germano Marani, Matteo Pederzoli, Philip Sakimoto, Massimo Stoppa, Johannes van de Ven, Michael Taylor, Tymon T. Chmielecki, Silvano M. Tomasi, Flaminia Giovanelli, and Olvin Vegas, for their guidance and advise
- Those who made the Pavilion possible by providing the images in the black corridor and the music (they have been mentioned earlier).



[www.humandevelopment.va](http://www.humandevelopment.va)