

WORLD ASSOCIATION OF SOIL AND WATER CONSERVATION

HOT NEWS

Issue 11, 2017



WASWAC HOT NEWS No. 11, November, 2017 Contents

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WASWAC President's New Year Message of 2018

The year of 2017 will be passed soon and the new year of 2018 is about around the corner. Take this opportunity of saying goodbye to 2017 and welcoming the prosperous 2018, I would like to express my heartfelt thanks to all WASWAC councilors, advisers, Regional vice-chairmen and all members. Merry Christmas and happy new year to you and your family!

During this year, WASWAC was developed as expected, everything was going smoothly. Our association is becoming stronger and stronger with the support from all of you. Thanks! I am happy to make a brief summary of 2017 and general plan for 2018.

1. To improve and consummate WASWAC council organization

It is the first year for the new Council in the new term (2017-2019). We have made a great efforts of council improvement and consummation. To accomplish more effective management and more international operation, 6 committees were established in the framework of council.

- (1) Organization Committee, Chairman: Miodrag Zlatic
- (2) International cooperation and development committee, Chairman: José Luis Rubio
 - (3) Conference committee, Chairman: Suraj Bhan
 - (4) Publication Committee, Chairman: Julian Dumanski
 - (5) Financial Committee, Chairman: Liu Xiaoying
 - (6) Award committee, Chairman: Duihu Ning

I hope that more and more people will be involved in the committees above, to make contribution to the development of our association.

2. The proposed book of "Degradation of Soil and Water Resources: A Global Issue" has made a great progress



The proposed book of "Degradation of Soil and Water Resources: A Global Issue" (working title) has made a great progress under the support of Dr Ted L. Napier and all co-editors and authors. The primary focus of this book is soil and water degradation resulting from agricultural production. Degradation of soil and water resources has been and will continue to be a very serious environmental problem throughout the world. Erosion of soil resources has resulted in a significant decline in agricultural productivity and has adversely affected the socio-economic life-styles of billions of people. Continued degradation of soil and water resources will threaten the soci-economic well-being of even greater numbers of people in the future. The proposed text will examine the extent of land degradation in multiple geo-political regions of the world and will assess alternative approaches to address the problems identified. Contributors will assess the nature, extent and consequences of soil and water degradation within specific geo-political regions of the planet. They will summarize existing research literature from physical and social science perspectives and discuss the merits of various approaches. This book will be provided detailed information regarding the state of soil and water degradation, and the public policy approaches that have been employed to address the problem identified will also be discussed.

Until now we have finished 14reviewed chapters and hopefully the rest chapters will be completely done in the upcoming 2 months.

3. The 1st World Conference on Soil and Water Conservation under Global Change (CONSOWA) was held successfully

With the great contribution of professor Ildefons Pla Sentis and his colleagues, the 1st World Conference on Soil and Water Conservation under Global Change was successfully held from 12-16 June 2017 in Lledia (Spain). As one of the most important event for the field of soil and water conservation, this conference was jointly supported by ISCO, WASWAC, ESSC, IUSS, SWCS, IECA, and WASER. This conference analyzed the present and previewed future situation at worldwide level under the influence of global changes. And also, this conference was positive in



strengthening increased collaboration for all the related societies, this allow these associations to reach their goals more efficiently. For the future further collaboration, during this conference, a proposal, called "Lleida declaration" was formed and released.



Some participants in the field trip

4. WASWAC Council Meeting was held during CONSOWA

WASWAC Council meeting was held on 12th of June in Lleida, Spain during CONSOWA. Councilors attended CONSOWA were all attended this meeting. Prof. Duihu Ning, the Secretary General of WASWAC, presented a brief introduction of WASWAC council progresses since WASWAC World Conference III, which was held in August, 2016. Dr Mark Nearing, Editor in Chief of ISWCR, gave a brief report on our official Journal. Prof. Valentin Golosov announced that the Second International Youth Forum on Soil and Water Conservation (2nd IYFSWC) will be held on 27-31 August 2018 in Moscow. President Li Rui reported the progress of Fourth World



Conference preparing, which will be held jointly with the ISCO-20 in New Delhi, India in 2019.



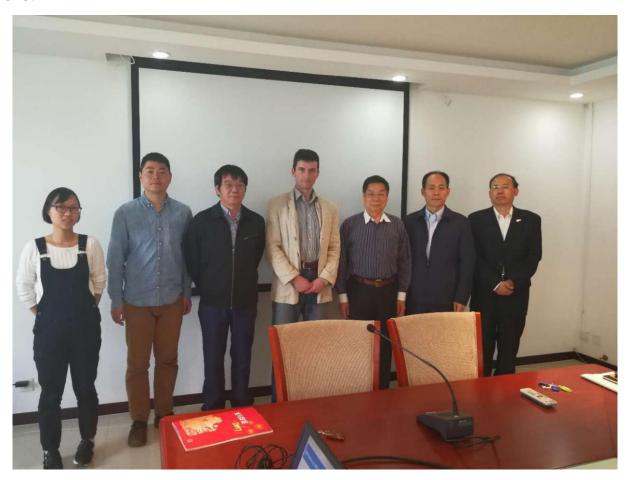
WASWAC Council meeting

5. The preparation for the second international Youth Forum on Soil and Water Conservation (2nd IYFSWC) was going smoothly

The 2nd IYFSWC is aimed to be held in Moscow in the summer of 2018. On April 17, Dr. Sergey R. Chalov, from the Faculty of Geography, Lomonosov Moscow State University, Russia, visited the secretariat of WASWAC, to discuss details about the coming event. After this discussion, the official forum website was designed and the first-round flyer was released. To encourage early-career scientists to contribute to soil and water conservation in the world, the Outstanding Youth Paper Award will be continued in this forum. This means that at most 10 authors who submitted paper in excellent quality will be evaluated to receive this award. We welcome all our members to take this opportunity to attend this meaningful event in August 27-31,



2018.



Dr. Sergey R. Chalov visits the secretariat of WASWAC to

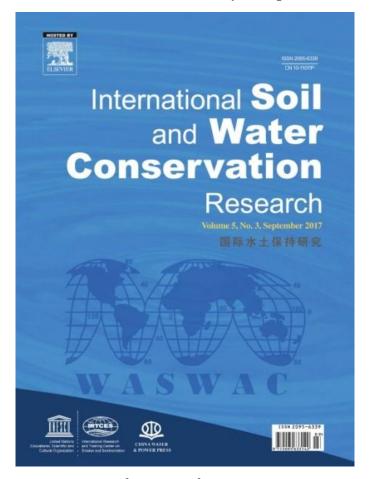
discuss details about 2nd IYFSWC

6. WASWAC official Journal ISWCR is indexed in ESCI

After the establishment of new Editor Board, Chaired by Dr Mark Nearing, International Soil and Water Conservation Research (ISWCR), the WASWAC official Journal, has made a lot of progress. Recently the Journal has been selected in Emerging Sources Citation Index (ESCI) according to the notification from Clarivate Analytics on Oct. 19, 2017. The indexing and abstracting begin from V. 3(1) 2015. This is a good news for all of us, thanks for the support from our all councilors, advisers, members, and especially for the editorial board of ISWCR. I believe that we will make the progress to be indexed by SCI(E) very soon under the continuous support from all of you. So far, the abstracting and indexing list for ISWCR are renewed including Emerging Sources Citation Index (ESCI), SCOPUS, Chinese



Science Citation Database (CSCD), and Directory of Open Access Journals (DOAJ).



The cover of ISWCR

7. ISWCR held an administrative meeting in Beijing

On December 6, 2018, the International Soil and Water Conservation Research (ISWCR) held a special administrative meeting in Beijing. The meeting was mainly initiated and chaired by Dr. Mark Nearing, the editor-in-chief of the Journal, who had been invited by the Journal hosted organization (IRTCES) for a two week visiting in China for organizing the meeting. Prof. Li Rui, the President of WASWAC, Mr. Ning, Duihu, the deputy director of IRTCES, Prof. Tingwu Lei, the editor-in-chief the Journal and Prof. Hongwei Fang, the associated editor of the Journal attended the Meeting. There were also represents from China Water Power Press, Clarivate, and KeAi Communications, Co. Ltd. The executive editor of the Journal Dr. Paige Chyu had summarized the journal performance in recent years. Project manager Mr. Paul Du from Clarivate had given a presentation about above and



beyond Editorial and Journal Manger Ms. Chai Zhao from KeAi Communication had a presentation about how KeAi supports the Journal Development. During the meeting, all participants involved in intensive and in-depth discussion regarding to the performance, scientific standard, working flow, promotion solutions, and marketing strategies for further development of Journal.



The administrative meeting of ISWCR

8. Project "Global soil erosion evaluation" was set up

Global soil erosion evaluation, as a special research project undertaking by WASWAC and Institute of Soil and Water Conservation of CAS & MWR, was set up by the State key laboratory of soil erosion and dryland farming on the loess plateau (China) on October 22, 2017. This project is aimed to establish the global soil erosion database through collecting recent environmental data that influenced soil erosion; to finish the series global soil erosion maps and to evaluate the global soil erosion risk on the basis of investigation, model, and remote sensing/GIS; to analyze global



soil erosion distribution and characteristics; to reveal the relationships between global change and main factors to influence the spatial variation; and to provide support for the treatment of soil erosion. This project will be very meaningful not only for the theory and methods on evaluating soil erosion in regional scales, but also for drawing up the strategies to control soil erosion in global scale.



The kick-off meeting of global soil erosion evaluation

9. The Upgraded WASWAC website is established

The WASWAC website was upgraded successfully this year. As our official website was damage seriously attacked by the hacker(s) in the beginning of 2017, so this edition was introduced much safer technologies to protect our data. All related information has been uploaded to our new website, we hope much more news would be possible provided by our members over the world in the future. It is a good platform to share with all our members.





The new website

As I have known the 8 terms above mentioned are only part of our work, many efforts and contributions made by all councilors and members are not included, such as Dr Ron Reicosky and Mr Roberto Peiretti on conservation agriculture, Professor José Luis Rubio on international cooperation, Dr Ian Hannam on Soil conservation law, Professor Suraj Bhan on the preparing the forth WASWAC World Conference, Dr Panos Panagos on the global soil erosion research, etc.

In the year of 2018, we will continue to make efforts to WASWAC progress. We will organize the 2nd IYFSWC in Moscow during August 27-31, 2018, and make the preparation for the 4th WASWAC World Conference, which will be held in New Delhi, India, in November 5-9, 2019. I hope that I can see all of you in such important occasions.



Finally, with the arrival of 2018, hope our all members all the joys of happiness throughout the prosperous New Year.

Best wishes to you for 2018,

L. Di

Prof. Li Rui

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WASWAC World Conference IV will be held in 2019

Managing Soil and Water Resources for Climate-Smart Agriculture Toward Global Food and Livelihood Security

At New Delhi, India, November 5th-9th, 2019















The conference will focus on the protection and conservation of land and natural resources for sustainable use and development. The target groups include scientists, researchers and academicians with multidisciplinary expertise, outreach and extension professionals, engineers, land users including farmers, planners and policy makers, students, NGO's, and other stakeholders who are active or interested in the states of art and science of natural resources management. We feel proud in inviting your active participation and valued deliberations to make this international conference a successful event.

Welcome to be New Delhi to attend
The WASWAC World Conference IV
in November 2019



The Second International Youth Forum on Soil and Water Conservation (2nd IYFSWC)

The Second International Youth Forum on Soil and Water Conservation (2nd IYFSWC)

Moscow, Russia, 27-31, August, 2018









Outstanding Youth Paper Award:

To encourage early-career scientists to contribute to soil and water conservation in the world, the WASWAC has launched the WASWAC Youth Outstanding Paper Award (DATUM) 2018. The application for the award is open from now.

Key dates of the Forum:

Registration opens - December 2017

Abstract submission deadline - 15 March 2018

Registration & fee payment

deadline (early bird) - 01 May 2018

Notice of abstract acceptance - 15 April 2018

More details please go to the official website

http://www.eng.geogr.msu.ru/IYFSWC

or our association's website www.waswac.org



World Soil Day 2017



World Soil Day is celebrated annually on the 5th of December at the Food and Agriculture Organization of the United Nations (FAO) headquarters in Rome, the regional offices and through national and local events.

2017 Theme: Caring for the Planet starts from the Ground

Soil is the upper layer of earth, a mixture of organic and inorganic matter, in which plants grow.

It is a finite natural resource. On a human time-scale it is non-renewable. However, despite the essential role that soil plays in human livelihoods, there is a worldwide increase in degradation of soil resources due to inappropriate management practices, population pressure driving unsustainable intensification and inadequate governance over this essential resource.

World Soil Day 2017 activities aim to communicate messages on the importance of soil quality for food security, healthy ecosystems and human well-being.

According to the Food and Agriculture Organization of the United Nations (FAO):

- ♣ Soil holds three times as much carbon as the atmosphere and can help us meet the challenges of a changing climate
- ♣ 815 million people are food insecure and 2 billion people are nutritionally insecure, but we can mitigate this through soil
- **♣** 95% of our food comes from soil



♣ 33% of our global soils are already degraded

(Details at : http://www.un.org/en/events/soilday/index.shtml)



Introduction on World Soil Day

The International Union of Soil Sciences (IUSS), in 2002, adopted a resolution proposing the 5th of December as World Soil Day to celebrate the importance of soil as a critical component of the natural system and as a vital contributor to human wellbeing.

Under the leadership of the Kingdom of Thailand and within the framework of the "Global Soil Partnership", FAO has supported the formal establishment of World Soil Day as a global awareness raising platform.

The FAO Conference, in June 2013, unanimously endorsed World Soil Day and requested official adoption at the 68th UN General Assembly. In December 2013, the 68th UN General Assembly declared 5th of December as the World Soil Day.

Since 2012, the FAO-GSP has been organizing celebration events of this important day.





Global Soil Erosion



An Assessment of the global impact of 21st century land use change on soil erosion

Human activity and related land use change are the primary cause of accelerated soil erosion, which has substantial implications for nutrient and carbon cycling, land productivity and in turn, worldwide socio-economic conditions. Here we present an unprecedentedly high resolution (250 × 250 m) global potential soil erosion model, using a combination of remote sensing, GIS modelling and census data. We challenge the previous annual soil erosion reference values as our estimate, of 35.9 Pg yr⁻¹ of soil eroded in 2012, is at least two times lower. Moreover, we estimate the spatial and temporal effects of land use change between 2001 and 2012 and the potential offset of the global application of conservation practices. Our findings indicate a potential overall increase in global soil erosion driven by cropland expansion. The greatest increases are predicted to occur in Sub-Saharan Africa, South America and Southeast Asia. The least developed economies have been found to experience the highest estimates of soil erosion rates.

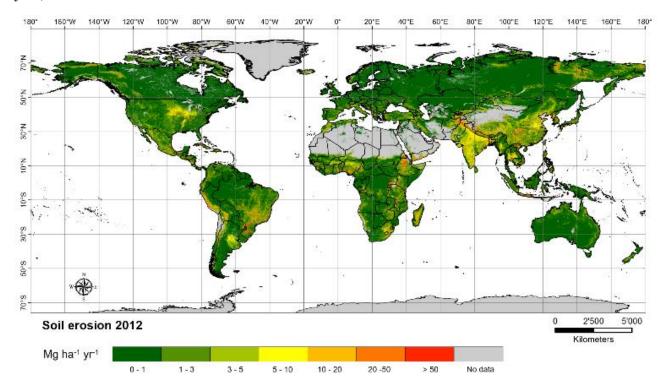
Main highlights

- Modelled area: 125 million Km² which is about 84.1% of Earth's land
- 202 countries included in the study
- 35 Pg yr⁻¹ of soil eroded in 2001. The estimates are lower compared to past studies
- in 2012, 35.9 Pg yr⁻¹ Increase of 2.5% in soil erosion globally (due to land use change)
- Cropland total annual average soil erosion: 17 (-0.7, +1) Pg yr⁻¹
- Gross Soil Organic carbon displacement by water erosion ca. 2.5 Pg C yr⁻¹

Global perspective on soil erosion



Our baseline model predicts an annual average potential soil erosion amount of 35 Pg yr⁻¹ for 2001, with an area-specific soil erosion average of 2.8 Mg ha⁻¹ yr⁻¹. In 2012, we estimated an overall increase of 2.5% in soil erosion (35.9 Pg yr⁻¹), driven by spatial changes of land use. According to the baseline scenario, at a continental level, South America shows the highest prediction of average soil erosion rate (3.53 Mg ha⁻¹ yr⁻¹) in 2001, followed by Africa (3.51 Mg hha⁻¹ yr⁻¹ and Asia (3.47 Mg ha⁻¹ yr⁻¹). North America, Europe and Oceania show considerably lower predicted values, totalling 2.23, 0.92 and 0.9 Mg ha⁻¹ yr⁻¹, respectively. In 2012, the latter group of continents indicated an estimated decreasing trend of soil erosion driven by land use change, with the highest decrease predicted in North America (4.8%). For Asia, we predict a slight increase of about one percent, mainly driven by a noticeable increase in soil erosion in the Southeast Asian countries. China (~2%) and India (~0.45%), in contrast, even though densely populated show a decrease in soil erosion estimates, while we observe a noteworthy increase in soil erosion in South America and Africa. Africa surpasses South America with an estimated increase of soil erosion of ~10% in 2012, thus becoming the continent with the highest average soil erosion rate (3.88 Mg ha⁻¹ yr^{-1}).



Land use/cover and soil erosion



We assessed the dynamics in land use between 2001 and 2012. This resulted in a forest decline (~1.65 million km²), an expansion of the semi-natural vegetation (savannah, scrublands, grassland, transition forest) (~1.43 million km²) and an expansion of cropland (~0.22 million km²). A total of 2.26 million km² of forests are estimated to be lost during the study period, mostly replaced by semi-natural vegetation (2.17 million km²) and to a lesser extent by cropland (~0.1 million km²). In the baseline scenario, the change from forest to other land uses caused an increase of 0.61 Pg yr-1 of soil erosion. The substitution of forests for cropland (4.1% of the forest lost) is responsible for about 52% of this increase in soil loss. At the same time, a forest area gain of about 0.61 million km² occurred during the study period, resulting in a net loss of ~1.65 million km². The area which had undergone a change during the study period totalled about 3.3% of the study area (equal to ~4 million km²), 2.9 million km², of which ~2.4% showed an increase in the estimates of soil erosion of 1.74 Pg yr-1. The remaining 1.1 million km² (~0.9%) under land use change experienced a decrease in soil erosion of 0.88 Pg yr-1. This results in an estimated overall increase of soil erosion for areas with land use change of about 0.86 Pg yr-1.

Conservation agriculture and soil erosion

The conservation agriculture covers about 15.3% of the observed cropland (1.6 of 10.3 million km²), resulting in an estimated overall soil erosion reduction of about 7% compared to the baseline scenario in 2012 (from 10.93 to 10.15 Pg yr⁻¹). At a continental level, the highest soil erosion reductions are estimated in South America (16%), Oceania (15.4%), North America (12.5%), and to a lesser extent in Europe (1.5%), Asia (1.2%) and Africa (1.1%).

Data and additional material

The 250x250m map of global soil erosion is available from the corresponding author upon request. The data will be uploaded in the European Soil Data Centre (ESDAC) upon the finalisation of studies in the workflow. You can contact <u>Pasquale Borrelli</u> (University of Basel) or <u>Panos Panagos</u> for more information.

In the article <u>supplementary information</u> (<u>https://www.nature.com/articles/s41467-017-02142-7</u>), there is detailed description for the model and the data inputs.

Details at: https://esdac.jrc.ec.europa.eu/themes/global-soil-erosion



Land and Soil Management Award



About the Award

Sustainable land and soil management is central to improve our food systems, maintain a healthy environment and ensure European rural development. Indeed, soils, through their structure and the great variety of species they host, perform numerous functions including food production, nutrient and water storage, filtering, buffering as well as breaking down and conserving organic matter. They also play a central role in the protection of water and in the natural exchange of gases with the atmosphere. Moreover, soils are biological habitats, gene pools, elements of landscapes and of cultural heritage as well as providers of raw materials. They are therefore crucial for agriculture and for all human beings as well as for nature itself, and are the foundation of our health and our wealth. Soils are as such part of Europe's greatest treasures, thus, it is important to promote and reward practices which contribute to their protection.

The prize rewards land use and soil management practices mitigating soil threats i.e. soil degradation, erosion, reduction of organic matter content, diffuse contamination, and compaction as well as the reduction of soil biodiversity, salinization, sealing, flooding and landslides. In doing so, the award sheds light on outstanding achievements, encouraging new concepts of land and soil protection and their implementation in land management, as well as enhancing awareness about the importance of land and soil functions.

Who can apply?

Farmers, landowners, land managers, groups of farmers, on their own or in collaboration with research institutes, universities and/or private companies.

Why to apply?

To recognize the great value of the farmer's work, by promoting the winning project as a good practice at the EU level. Also, to enhance the visibility of such ways of farming at the



local, national as well as European scale and to encourage the farmers to further develop their work in a sustainable path.

5.000 € as well as a diploma of recognition are awarded to the winning project every year.

How to apply?

The call for application is open, deadline for applying is December 31, 2017.

The award is bestowed to the winner every year during the Forum for the Future of Agriculture (FFA) Gala Dinner.

For the application form 2017/2018 click here.

Please note: the application should preferably be filled out in English. If the applicant chooses other language a well-structured English summary of the project should be enclosed.

Partners

This award has been launched in 2008 by the European Landowners' Organization (ELO), under the auspices of the European Commission (DG Environment and the Joint Research Centre) and in association with the University of Natural Resources and Life Sciences (BOKU) of Vienna, Syngenta International AG, as well as the Centre for Soil and Environmental Sciences of the Ljubljana University. Since then, the award jury has selected outstanding achievements throughout the European Union in the field of sustainable soil and land management.

Prize winners

Year	Project name	Location	Name of applicant
2016/2017	Healthy Soil for Healthy Food	Austria	59 Austrian farmers, SPAR and WWF Austria
2015/2016	Creating new land and soil management opportunities under Mediterranean soil and climatic limitations	Portugal	Portalimpex, Lda
2014/2015	Soil Regeneration at West Woodhay Farms	UK	West Woodhay Farms
2013/2014	The Pontbren Project	Wales	Pontbren Farmers Group
2012/2013	Global approach for a sustainable agroecosystem	France	E.A.R.L. LEFEBVRE
2011/2012	Certified course "soil practitioner" for crop and grassland farmers	Austria	Bio Austria (group of farmers)
2010/2011	The Land Stewardship Network	Spain	Jordi Pietx
2009/2010	Little things mean a lot	Iceland	Erlendur Björnsson
2008/2009	Jistebnice Highlands	Czech Republic	Jana Maděrová

For more information please contact Award Coordinator:

Emmanuelle Mikosz: emmanuelle.mikosz@elo.org

Details at: http://www.europeanlandowners.org/awards/soil-land-award?mc_cid=c92ed4112a&mc_eid=468a5141b2



WASWAC MEMBERSHIP APPLICATION/RENEWAL FORM (Issued 120501)

(For applicants from all countries)

I)□4(SM&GM)

- *Membership categories & rates from July 18, 2005, amended March 3, 2007 and March 4, 2010.
- **1.** IM (Individual membership): US\$20 for 5 years for developing countries (In China, members pay 130 yuan RMB); US\$40 for 5 years for developed countries and persons working in international organizations worldwide.
- **2.** LM (Life membership): US\$80 for developing countries (In China, members pay 520 yuan RMB); US\$160 for developed countries and persons working in international organizations worldwide. Persons who have passed their 60th birthday pay only half of these LM rates.
- **3.** OM (Organization membership): For universities, research and implemental institutions, government agencies, NGOs, societies, associations and international organizations, etc. Persons belonging to an Organization member will receive the same online products and services as the other two above categories: \$100/year for an organization with up to 150 persons; \$150/year for an organization with up to 300 persons: \$200/year for an organization with up to 500 persons; and \$10/year for an additional 100 persons or part thereof.
- **4.** SM&GM (Student membership & Gift membership): US\$5/year worldwide, to be purchased to give to colleagues, friends, students, etc.

For sending money by foreign wires through a bank, please give the following information to your bank:

Name of Receiver (A/C Holder's Name): World Association of Soil and Water Conservation

Bank Name and Address: China Construction Bank, Shoutinanlu Branch, Beijing, China, No. 9 Shoutinanlu Street, Haidian District, Beijing, P R China

A/C NO.: 1100 1042 7000 5301 6996

Message to write on the Bank Sheet: WASWAC Membership due for Ms./Mrs./Mr./Prof./Dr., Country

NOTE: 1. Do not deduct the bank fee from the amount of money to send. **2.** For sending money by wire/bank transfer or check please add US\$7 per transaction to compensate for the charge at the receiving bank in Beijing. This additional charge does not apply for **WESTERN UNION** or any payment of US\$50 or more.