


Curriculum Vitae

MANAL AWAD KHIRY

Personal data

		
Family name:	Khiry (Ms)	
First names:	Manal Awad	
Place and year of birth	Karima, Sudan, 12.12.1970	
Marital Status	Married , mother for three children (Mohamed, Samah and Mazin)	
Nationality/Nationalities:	Sudanese	
Country of residence:	Sudan	
Contact address:	Department of Forest Management, Faculty of Forestry, University of Khartoum, Shambat - Postal code 13314	
– address:		
– telephone:	Mobile Phone: 00249912648585	
– e-mail:	E-mail: nadakheiry@hotmail.com nadakheiry@yahoo.com	

Position Held

Assistant Professor at Faculty of Forestry , University of Khartoum

PhD Title:

Spectral Mixture Analysis for Mapping and Monitoring Desertification Processes in Semi-Arid Areas in North Kordofan (Sudan).

Education

Educational establishment	Duration of studies	Degree and Graduation Year	Main Subjects
Institute of Photogrammetry and Remote Sensing, Faculty of Forestry, Geo-and Hydro-Sciences, Dresden University of Technology, Germany.	April-July ,2014	Post doc	Remote sensing and GIS for arid regions
Institute of Photogrammetry and Remote Sensing, Faculty of Forestry, Geo-and Hydro-Sciences, Dresden University of Technology, Germany.	Aug-Sept, 2011	Post doc	Teaching modules in remote sensing and GIS
Institute of Photogrammetry and Remote Sensing, Faculty of Forestry, Geo-and Hydro-Sciences, Dresden University of Technology, Germany.	2003-2007	PhD degree	Remote sensing and GIS
Institute of International Forestry and Forest Products- Dresden University of Technology, Germany	1999-2003	M.Sc. Forest. Trop	Forestry , Remote sensing and GIS
Faculty of Forestry, University of Khartoum.	1992-1997	B.Sc. in Forestry (Honors) Class One	Forestry

Languages Abilities

Language	Skills
Arabic	Mother tongue
English	Excellent
Germany	Good

Professional Experiences:

Location , Employer, Position, main duties	Years
<ol style="list-style-type: none"> 1. Teaching Assistant at the Faculty of Forestry , University of Khartoum, Sudan 2. Lecturer of Forest Management, at the Faculty of Forestry , University of Khartoum, Sudan 3. Assistant Professor of Remote and GIS at the Faculty of Forestry , University of Khartoum, Sudan <p>Teaching duties :</p> <p>Teaching the subjects of:</p> <ul style="list-style-type: none"> • Forest management • Forest survey • Introduction to remote sensing and GIS 	Sep 1998-Present

<ul style="list-style-type: none"> • Advanced courses in applications of remote sensing and GIS for monitoring and mapping forests in drylands • Advanced courses in applications of remote sensing and GIS for desertification and land degradation in arid lands • Supervision of undergraduate research at the faculty level. • Supervision of postgraduate students at M.Sc. and PhD levels • Conduction and supervision of students practical and field excursions • Preparation and conduction of faculty annual working plans for different forests areas • Preparation of exercise, tests and examinations for under and postgraduate students • Participation in different scientific forums, workshops, seminars and conferences in remote sensing and GIS at local, national, regional and international levels • Conduction of regular specialized training courses and sessions for researchers and practitioners in applications of remote sensing and GIS techniques 	
<p>4. Assistant Supervisor at the Institute of Photogrammetry and Remote Sensing Faculty of Forestry, Geo-and Hydro-Sciences, University of Dresden, Germany</p> <p>Working duties:</p> <ul style="list-style-type: none"> • Participated as Lecturer at some training courses arranged by NGOs and UNDP projects in application of remote sensing and GIS in monitoring and mapping natural resources (in Dresden Germany) • Supervised M.Sc Students at the Institute of Photogrammetry and Remote Sensing TU Dresden, Germany. • Supervised and trained several graduates and undergraduate students in remote sensing applications (TU Dresden) • Provided technical assistance in practicals and excursions of remote sensing and GIS (TU Dresden as well as in different forests in Germany) 	Oct 2000-Jun 2007
<p>5. Teaching in the UNEP/UNESCO/BMU International Postgraduate Course on the Environmental Management for Developing and Emerging Countries, Dresden, Germany</p> <p>Duties and responsibilities include:</p>	Jan 2004-Apr 2005

<ul style="list-style-type: none"> • Participated as lecturer in some training course in remote sensing and GIS • Assisted my main supervisor who conducted some lectures and supervised some research topics arranged by NGOs and UNDP programmes in applications of remote sensing and GIS in arid and semi-arid areas • Provided technical assistance in GIS and RS at local and regional level 	
<p>6. Director of remote sensing and GIS unit at Faculty of Forestry , University of Khartoum</p> <p>Duties and responsibilities at the unit included:</p> <ul style="list-style-type: none"> • Retrieval and analysis of remote sensed data for different applications such as land surface, forest cover changes, vegetation cover , soil types , desertification and land degradation, water resources and wildlife • Analysing forest cover changes and their relation to land degradation and desertification in drylands • Applications of GIS to map and monitor land cover/ land use and vegetation cover changes in arid and semi-arid lands • Training and supervision of students in applications of remote sensing in monitoring of the fragile natural resources in Sudan • Establishment of database using remote sensing for natural reserved forest and some vulnerable areas to desertification and land degradation in North Kordofan State, Sudan • Assist in processing and interpretation of satellites imageries for natural resources analysing for under and post-graduate students at the faculty • Conducted training workshops in Remote Sensing , (Introduction and Applications) at Faculty of Forestry , University of Khartoum, 31/10 - 04/11/2010 • Conducted training workshops in GIS (Introduction, Principles and Applications) at Faculty of Forestry , University of Khartoum, 04/03 - 08/03/2012 	<p>Aug 2007- Feb2010</p>
<p>7. Consultancies</p> <p>I. MEFET Engineering counterpart in remote sensing and GIS applications for North Kordofan and Khartoum structural Plans</p> <p>Duties and activities</p> <ul style="list-style-type: none"> • Developing remote sensing and GIS manual for the project • Classification and interpretations of remote sensing data for the project 	<p>Sep 2007-Oct 2008</p>

<ul style="list-style-type: none"> Supervised in using remote sensing and GIS in mapping and monitoring natural resources in Khartoum state Working in different software (ERDAS Imagine 9.3, ArcGIS 9.3 and ENVI) in analysing and mapping the vegetation cover and landuses in NorthKordofan State, Sudan 	
II. Nile Basin Programs: the main task is to prepare and proposal of monitoring and mapping Nile basin Riske assessment of Nile basin problems by using remote sensing and GIS tools Training workshop for IFAD project in remote sensing and GPS tool	Jun 2008-Sep 2010 March 2014-April 2014
8. Extension responsibilities: <ul style="list-style-type: none"> Assisting governmental administrative efforts (e,g FNC) in the forest issues of forest management Consultancy in mapping and assessment of sand encroachment by spectral mixture analysis in arid and semi-arid areas in North Kordofan State, Sudan Technical advisor for Gum Arabic Research Centre in mapping and monitoring the Gum Arabic belts by using remote sensing and GIS tools 	

Courses, International Seminars, Workshops and Conferences:

Courses	Duration
ALARM Graduate Training Course on “Models in RiskAssessment to Biodiversity” Leipzig, Germany.	26 th April to 5 th May2004
Participant in the UNEP/UNESCO/BMU International Postgraduate Course on Environmental Management for Developing and Emerging Countries, Dresden, Germany	5 th January to 15 th April 2004
Postgraduate course in Tropical Forestry and Management at Dresden University of Technology, Faculty of Forest, Geo and Hydro Sciences, Institute of International Forestry and Forests Products, Tharandt, Germany	1. October 2000 to 1.January 2001
International Seminars and Workshops	Duration
DAAD Project 53 Workshop, Technical University of Dresden, Faculty of Forest, Geo- and Hydroscience, Tharandt, Germany	30 th May to 11 th June 2005
Regional DAAD Workshop Project -53 “Expert Seminars for Revising and	28 th February to

Complementing the Teaching Modules on Research Methodology in Natural Resources”, University of Kordofan, Elobeid, Sudan	8 th March 2006
Workshop on Innovative application of Remote Sensing & Geoinformation Sciences for Female Professionals in the Earth Sciences, Organized by ITC, AARSE, Nuffic and NARSS, Cairo, Egypt	03 rd November to 16 th November 2006
Workshop in Reduction Emission from Deforestation and Forest Degradation REDD , organized by the Higher Council of Environment and Natural Resources(HCENR) , United Nations Development Program (UNDP) and Forest National Corporation (FNC) Khartoum, Sudan	22 December 2012 to 23 December 2012
Space –Based Technologies for Disaster Risk Management workshop and training course, Organized by The Unite Platform for Space-Based Information for Disaster Management and Emergency Response (UN-SPIDER) and Remote Sensing Authority- National Centre for Research (NCR), Khartoum, Sudan	5 May 2013 to 9 May 2013
International Conferences	Duration
Conference of Remote Sensing and Geoinformation Processing in the Assessment and Monitoring of Land Degradation and Desertification (RGLDD) in support of the UN Convention to Combat Desertification, Trier, Germany	7 th September to 9 th September 2005
ISPRS Technical Commission VII Symposium: Remote Sensing, from Pixels to Processes Thematic Processing, Modelling and Analysis of Remotely Sensed Data ITC (International Institute for Geo-Information Science and Earth Observation), Enschede Netherland	6 th May to 11 th May 2006
2 nd International Conference on GIS and Remote Sensing Days: Global change issues in developing countries and emerging countries, Universität Göttingen, Germany	4 th October to 6 th October 2006
Deutscher Tropentag 2006: Prosperity and Poverty in a Globalised World - Challenges for Agricultural Research, Universität Bonn, Germany	11 th October to 13 th October 2006
6th International Conference on Earth Observation & Geoinformation Sciences in Support Africa’s Development, Cairo, Egypt	03 rd to 16 th No 2006
International Symposium on Dry lands Ecology and Human Security Regional Perspectives, Policy Responses and Sustainable Development in the Arab Region - Challenges and Opportunities, Dubai, Emirates	4 th to 7 th Dec 2006

Academic Contributions:

2012 Supervisor M.Sc. study. The title of the thesis:

1. *Evaluation of Land use, and vegetation cover Changes for the period (1972-2005) in Nyala Locality South Darfur State, Sudan.* College of graduate studies (SUST) University of Khartoum. (Candidate: Taha Adam Abddla Abakar)

2012 Co-supervised M.Sc. study. The title of the thesis:

2. *Application of Geographical Information System and Remote Sensing Technologies for Mapping the occurrence of Rift Valley Fever in White State, Sudan.* College of graduate studies (SUST) University of Khartoum. (Candidate: Adam Ismail Ahmed)

2013 Supervisor M.Sc. study. The title of the thesis:

3. *Assessing the Vegetation Cover Changes Using Remote Sensing Technique ; A Case Study Kunduwa Forest , South Darfur State , Sudan.* College of graduate studies (SUST) University of Khartoum. (Candidate: Razan Salih Mohamed)

2014 Supervisor M.Sc. study. The title of the thesis:

4. *Assessing and Mapping vegetation cover Using Remote Sensing Technique in Western AlGadarif State, Sudan.* College of graduate studies (SUST) University of Khartoum (Candidate: Sara Awead Alkaream)

2015 Supervisor M.Sc. Study. The title of the thesis:

5. *The use of Integrated Remote Sensing and GIS Technique to Determine Changes in Forest Cover in Agadi and Boot area in the Blue Nile State, College of graduate studies (SUST) University of Khartoum* (Candidate: Samia Bakheit Mando)

2016 Supervisor M.Sc. Study. The title of the thesis:

6. *Assessment of Livestock Migration Routes Changes Using Remote Sensing and GIS Techniques in Gadarif State, Sudan. College of graduate studies (SUST) University of Khartoum* (Candidate: Ayat Abdelrahim Elsharanni)

Publications:

- Khiry, M. A., Csaplovis, E. (2003):** Monitoring and Evaluation of Vegetation Cover Changes in Semi-Arid Areas by Means of Remote Sensing and GIS; A Case Study of Khartoum Forest Sub-Sector, Sudan (M. Sc. Thesis), Institute of International Forest Science, Tharandt, TU Dresden, Germany
- Khiry, M. A., Csaplovis, E. (2005):** Monitoring and Evaluation of Vegetation Cover Changes in Semi-Arid Areas by Means of Remote Sensing and GIS; A Case Study of Khartoum Forest Sub-Sector, Sudan (paper, presented in a Conference of Remote Sensing and Geoinformation Processing in the Assessment and Monitoring of Land Degradation and Desertification (RGLDD) in support of the UN Convention to Combat Desertification, , Trier, Germany.
- Dafalla, M. S., **Khiry, M. A.**, Ibrahim I. S., and Csaplovics, E. (2006): Land Covers Change Detection Using High Resolution Satellite Imagery in Arid and Semi-arid Areas of the Northern Kordofan State. Published in Global Change Issues in Developing and Emerging Countries. Proceedings book of 2nd International Conference on GIS and Remote Sensing days 2006, University Gottingen, Germany. ISBN: 978-3-938616-93-2. <http://univerlag.uni-goettingen>.
- Khiry, M. A., Csaplovics E. (2007):** Appropriate Methods for Monitoring and Mapping Land Cover Changes in Semi-arid Areas in North Kordofan (Sudan) by Using Satellite Imagery and Spectral Mixture Analysis of Multi-temporal Remote Sensing Images, 2007. **IEEE Journal** , Digital Object Identifier :10.1109/MULTITEMP.2007.4293065. E-ISBN:1-4244-0846-6, Print ISBN:1-4244-0846-6, INSPEC. Accession Number: **9789318**.
- Khiry, M. A., Csaplovics, E. (2007):** Spectral Mixture Analysis for Monitoring and Mapping Desertification Processes in Semi-arid Areas in North Kordofan State, Sudan. (**Rhombos-Verlag, Berlin 2007**). Book Published in Berlin, Germany. ISBN 978-3-938807-70-5. www.rhombos.de.
- Khiry, M.A., Mahmoud, T.E., and Hassan, I. A. (2008):** Contribution of Gum Arabic Production to Household Food Security in North Kordofan State, Sudan; Tropentag 2008, Kassel, Germany. . www.tropentag.de
- Khiry, M.A., Mahmoud, T.E., and Hassan, I. A. (2009):** Impacts of Agricultural Intensification on Land Cover Changes in North Kordofan- Sudan Using Remote Sensing Technique and Empirical Statistical Models; Tropentag 2009, Hamburg, Germany. www.tropentag.de

Khiry, M. A., Mahmoud, T. E., and Hassan, I. A. (2012): Applying Remote Sensing Tools for Assessing Desertification Process within the Agrosilvopastoral System, North Kordofan- Sudan ; Tropentag 2012, Göttingen, Germany. www.tropentag.de

Mahmoud, T. E. Maruod E. M., **Khiry, M. A.,** Elnaim, A. E., Zaid., M B. (2014): Competitiveness of Gum Arabic Marketing System at Elobeid Crops Market, North Kordofan State, Sudan; *World Journal of Agricultural Research*, 2014, Vol. 2, No. 5, 252-256 Available online at <http://pubs.sciepub.com/wjar/2/5/9>.

Hassan. I. A., Ismail, M. R., W., Baharudin M. Z., **Khiry, M. A.,** Mahmoud T. E. (2014): Effect of Root Pruning on leaf Expansion, Leaf Water Potential Stomatal Conductance Mangoa. *University of Kordofan Journal of Natural Resources and Environmental Studies, UKJNRES*, 1(1): 71-76, 2014 pISSN: 1858-6686; eISSN: 1858-6694. www.kordofan.edu.sd

Mahmoud, T. E., Osman, M. E., Makeen, **M.A., Khiry, M. A.,** Ali, H. I., Khatir, A. M., (2015): Photographical Analysis Expressing Adaptive Strategies to Mitigate Impacts of Climate Change in Central Arid Areas of North Kordofan State, Sudan; Welcome to Africa Proceedings, Volume 2, ISBN 978-3-942934-03-9. Scientific Cooperation Network on Climate Change Adaptation, funded by the German Academic Exchange Service (DAAD) & the Federal Ministry of Education and Research, Germany. www.tu-dresden.de/forst/w2a

Salih, R.M., **Khiry, M.A.,** Hamid, A.A., Mahmoud, T.E. (2015): Impact of War on Land Use Systems South Darfur by Applying Multi-temporal Satellite Imageries. Tropentag 2015, Stuttgart-Hohenheim, Germany, September 13-17, 2015. www.tropentag.de

Elkareem, S.A., **Khiry, M.A.,** Mahmoud, T.E., (2015): Assessing and Mapping Vegetation Cover Using Remote Sensing Technique in Western Gadaref State, Sudan. Tropentag 2015. Stuttgart-Hohenheim, Germany, September 13-17, 2015. www.tropentag.de

Khiry, M. A., Tarig E. Mahmoud, Elmar Csaplovics, Hassan I. Ali, Abdelrahman A. Khatir (2015): Description and Assessment of Land Cover Changes in Relation to Climatic Conditions and Socioeconomic Activities in Semi-arid Areas of North Kordofan State, Sudan. *University of Kordofan Journal of Natural Resources and Environmental Studies, UKJNRES*, 1(2): 20-38, 2014 pISSN: 1858-6686; eISSN: 1858-6694. www.kordofan.edu.sd.

Khiry, M. A. E. Csaplovic & T. E. Mahmoud., (2015): Change Vector Analysis for Analyzing and Mapping Desertification Processes in Arid and Semi-arid Region, North Kordofan State, Sudan. AASCIT Journal ,volume 2, issue 6 , November 30, 2015 online , ISSN: 2375-3803.

Sitar M. Ibrahim¹, **Manal A. Kheiry**, Mustafa O. Elsaid, Ahmed Y. M. Khair, Fathi H. Baldo and Maruod E. Maruod, (2016): The role of non- timber forest products to rural households income and livelihoods in Keilak locality of South Kordofan State, Sudan. Journal of Advance Research in Food, Agriculture and Environmental science JIAATS, volume-1, issue-11 November, 2016.

Khiry , M. A. & Csaplovics,² E., (2016): Categorization and Identification of Acacia Trees Based on Species in El Ain Natural Forest Reserve by Using Multi-Temporal Landsat Imagery and Spectral Angle Mapper Classification. IJRDO-Journal of Biological Science, volume-2 , Issue-12 December, 2016 .

Papers Presented in International Conferences (reviewed and published)

Khiry, M. A., Csaplovic, E. (2005): Monitoring and Evaluation of Vegetation Cover Changes in Semi-Arid Areas by Means of Remote Sensing and GIS; A Case Study of Khartoum Forest Sub-Sector, Sudan (paper, presented in a Conference of Remote Sensing and Geoinformation Processing in the Assessment and Monitoring of Land Degradation and Desertification (RGLDD) in support of the UN Convention to Combat Desertification, , Trier, Germany.

Khiry, M.A., Dafalla, M. S., Csaplovics E. (2006): Mapping and assessment of sand encroachment by spectral mixture analysis in arid and semi-arid areas: Case study North Kordofan, Sudan (paper presented in The 6th International Conference on Earth Observation & Geoinformation Sciences in Support Africa's Development, Cairo.

Khiry, M.A., Mahmoud, T.E., and Hassan, I. A. (2008): Contribution of Gum Arabic Production to Household Food Security in North Kordofan State, Sudan; Tropentag 2008, Kassel, Germany. . www.tropentag.de

Khiry, M.A., Mahmoud, T.E., and Hassan, I. A. (2009): Impacts of Agricultural Intensification on Land Cover Changes in North Kordofan- Sudan Using Remote Sensing Technique and Empirical Statistical Models; Tropentag 2009, Hamburg, Germany. www.tropentag.de

Khiry, M. A., Mahmoud, T. E., and Hassan, I. A. (2012): Applying Remote Sensing Tools for Assessing Desertification Process within the Agrosilvopastoral System, North Kordofan- Sudan ; Tropentag 2012, Göttingen, Germany. www.tropentag.de

Papers Presented in workshops

Csaplovis, E., **Khiry M. A.,** Dafalla, M.S. (2006): Review about Cultural and religious aspects impact on Land Use. Paper presented in DAAD Project 53 Workshop, Technical University of Dresden, Faculty of Forest, Geo- and Hydrosience, Dresden, Germany.

Khiry, M.A., Csaplovis E. (2006): Review and Adoption of Remote Sensing Methodologies in Natural Resources Management in Northern Kordofan State, Sudan. Paper presented in DAAD Project 53 Workshop on Expert Seminars for Revising and Complementation the Teaching Modules on Research Methodology in Natural Resources, University of Kordofan, Sudan.

List of keys publications

Khiry, M. A., Csaplovis, E. (2005): Monitoring and Evaluation of Vegetation Cover Changes in Semi-Arid Areas by Means of Remote Sensing and GIS; A Case Study of Khartoum Forest Sub-Sector, Sudan (paper, presented in a Conference of Remote Sensing and Geoinformation Processing in the Assessment and Monitoring of Land Degradation and Desertification (RGLDD) in support of the UN Convention to Combat Desertification, , Trier, Germany.

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Mahmoud. E., Maruod E. M., **Khiry, M. A.,** Elnaim, A. E, Zaied., M B., (2014): Competitiveness of Gum Arabic Marketing System at *Elobeid* Crops Market, North Kordofan State, Sudan; *World Journal of Agricultural Research*, 2014, Vol. 2, No. 5, 252-256 Available online at <http://pubs.sciepub.com/wjar/2/5/9>.

Hassan. I. A., Ismail, M. R., W., Baharudin M. Z., **Khiry, M. A.,** Mahmoud T. E. (2014): Effect of Root Pruning on leaf Expansion, Leaf Water Potential Stomatal Conductance Mangoa. *University of Kordofan Journal of Natural Resources and Environmental Studies, UKJNRES*, 1(1): 71-76, 2014 **pISSN: 1858-6686; eISSN: 1858-6694.** www.kordofan.edu.sd.

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Mahmoud, T. E., Osman, M. E., Makeen, M.A.,**Khiry, M. A.,** Ali, H. I., Khatir,A. M., (2015): Climate Photographical Analysis Expressing Adaptive Strategies to Mitigate Impacts of Climate Change in Central Arid Areas of North Kordofan State, Sudan; Welcome to Africa Proceedings, Volume 2, ISBN 978-3-942934-03-9. Scientific Cooperation Network on Climate Change Adaptation, funded by the German Academic Exchange Service (DAAD) & the Federal Ministry of Education and Research, Germany. www.tu-dresden.de/forst/w2a

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Sitar M. Ibrahim¹, **Manal A. Kheiry**, Mustafa O. Elsaid, Ahmed Y. M. Khair,Fathi H. Baldo and Maruod E. Maruod, (2016): The role of non- timber forest products to rural households income and livelihoods in Keilak locality of South Kordofan State, Sudan. Journal of Advance Research in Food, Agriculture and Environmental science JIAATS, volume-1, issue-11 November, 2016.

Khiry , M. A. & Csaplovics, E., (2016): Categorization and Identification of Acacia Trees Based on Species in El Ain Natural Forest Reserve by Using Multi-Temporal Landsat Imagery and Spectral Angel Mapper Classification. IJRDO-Journal of Biological Science, volume-2 , Issue-12 December, 2016 .

Software skills:

- ENVI 4.7 (Environment for Visualization Image)
- ERDAS Imagine
- ArcGIS
- e- cognition developer

Referees:

1. **Prof . Dr. habil. Elmar Csaplovic**, Institute of Photogrammetry and Remote Sensing , TU , Dresden, Helmholtzstr 10 , D- 01062 Dresden, Tel. +49-351-463-33372. E-mail: Elmar.Csaplovics@mailbox.tu-dresden.de
2. **Prof. Dr. J. Pretzsch** , Director of the Institute of International Forestry and Forest Products, WeißigerHöhe 1, 1737 Tharandt , TU Dresden, Germany ,Tel: +49-35203-3831814. E-mail: tropen@forst.tu-dresden.de
3. **Prof . Dr. Abdalla Mirghani** , Dean Faculty of Forestry, University of Khartoum , postal code 13314, Tel: +249-13-310104. E-mail: abdalla.eltayeb@uofk.edu
4. **.Prof . Dr. Elnour Abdalla Elssideg** , Department of Forest Management , Faculty of Forestry, University of Khartoum , postal code 13314, Tel: +249-13-310104. E-mail: eaelsiddig@uofk.edu