

Exhibit CS-HD-1

Resume of Harnoor Dhaliwal

Harnoor Dhaliwal

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Summary

Over 8 years of experience in environmental sustainability consulting. Proficient in sustainability measurement methodologies such as Life Cycle Assessment and Sustainability Return on Investment that help integrate sustainability principals into a product's life cycle.

Skills

- Life Cycle Assessment (LCA)
- Social Life Cycle Assessment (S-LCA)
- Successful educator
(have conducted over 20 onsite and over 35 online LCA trainings)
- ISO 14040 & 14044 Compliant reporting
- LCA software and tools (SimaPro, GaBi, openLCA, GREET, COMPASS)

Experience

SENIOR SUSTAINABILITY CONSULTANT | EARTHSHIFT GLOBAL, LLC | 2015 - PRESENT

- Managed and implemented LCA and Greenhouse Gas assessment projects for clients from fortune 500 companies and government agencies
- Co-authored studies and articles that were published and presented at conferences
- Developed courses on LCA and sustainability and conducted trainings
- Advised clients and the company internally on new and existing Life Cycle Impact Assessment methods such as, AWARE (measures impacts of water consumption), USEtox (measures toxicity), IPCC (measures greenhouse gas impacts) and ReCiPe 2016 (measures a range of environmental impacts)

SUSTAINABILITY ANALYST | EARTHSHIFT, LLC | 2010 - 2015

- Conducted LCA studies and prepared ISO compliant reports for range of product systems such as flexible packaging, medical products, mineral mining, labels and biofuels.
- Developed Life Cycle Inventory data for the US landfills and Incineration facilities based on literature research and communication with area experts
- Managed SimaPro software and database
- Co-authored journal articles and presented studies at conferences

JUNIOR LCA ANALYST | EARTHSHIFT, LLC | 2009 - 2010

- Conducted GHG analyses using GREET's data for producing biodiesel from different feedstocks
- Conducted screening LCA using simplified LCA tools – COMPASS, EarthSmart, PackageSmart
- Contributed to EarthShift's software development by testing and using them for screening LCAs
- Provided technical support for SimaPro
- Created questionnaires for life cycle data collection and building data inventories

- Researched environmental impact assessment models and methodologies such as ReCiPe 2008, IMPACT 2002+, EPD, CML, IPCC

Professional Certifications

LCA Certified Professional (LCACP) by the American Center for Life Cycle Assessment.

Certification ID 2009-25.

Peer Reviewed Publications

Dhaliwal, H., M. Browne, W. Flanagan, L. Laurin, M. Hamilton (2014). A life cycle assessment of packaging options for contrast media delivery: comparing polymer bottle vs. glass bottle. *International Journal of Life Cycle Assess* 19 (12):1965-1973. Available online at <https://rd.springer.com/article/10.1007%2Fs11367-014-0795-1>

Passell, H., Dhaliwal, H., Reno, M., Wu, B., Amotz, A. B., Ivry, E., Gay, M., Czartoski, T., Laurin, L., Ayer, N., (2013). Algae biodiesel life cycle assessment using current commercial data. *Journal of Environmental Management* 129: 103-111. Available online at <http://www.sciencedirect.com/science/article/pii/S0301479713004647>

Laurin, L., Dhaliwal, H., 2017. Life Cycle Environmental Impact Assessment. In: Abraham, M.A. (Ed.), *Encyclopedia of Sustainable Technologies*. Elsevier, pp. 225–232. ISBN: 9780128046777. Available online at <https://www.elsevier.com/books/encyclopedia-of-sustainable-technologies/abraham/978-0-12-804677-7>

Dhaliwal, H. and Dunn, P. (2017). Understanding Life Cycle Assessment: An LCIA Overview for Executives and Practitioners. Mar 24, 2017 publication description Triple Pundit. Available online at: <http://www.triplepundit.com/2017/03/understanding-life-cycle-assessment-lcia-overview-executives-practitioners/>

Dhaliwal, H. (2016). A Look Back: The Evolution of LCA and Life Cycle Impact Assessment. Oct 5, 2016 publication description Triple Pundit. Available online at: <http://www.triplepundit.com/2016/10/look-back-evolution-lca-life-cycle-impact-assessment/>

Dhaliwal, H., Thrane, M., Laurin, L. (2011). Danisco Xivia™ White Paper - Sustainable and Substantiated - For more sustainable, healthier products (2010). Available online at: http://www.danisco.com/fileadmin/user_upload/danisco/documents/products/xivia-white-paper.pdf

Peer Reviewed Conference Papers and Presentations

Dhaliwal, H., Brown, M., Flanagan, W., Griesser, J., Laurin, L. (2012) Comparative Life Cycle Assessment of +PLUSPAK™ vs. Glass Vials for Contrast Agent Delivery. Presented at LCA XII: Life Cycle Thinking... Life Cycle Living. September 26, 2012. Tacoma, WA, USA.

Dhaliwal, H., Thrane, M., Laurin, L. (2011). Applying System Expansion to Handle Multi-functionality in Xylitol Production. Presented at LCA XI: Instruments for Green Future Markets. October 5, 2011. Chicago, Illinois, USA.

Dhaliwal, H., Laurin, L. (2016). Social LCA of a Government Grant in Latin America. Presented at LCA XVI: September 27, 2016. Charleston, South Carolina, USA.

Dhaliwal, H., Boduch, S., Crowley, J. (2017). Comparative Greenhouse Gas Assessment of a Solar Installation in Vermont vs. Natural Gas Based Electricity (2017). Presented at LCA XVII: Get Inspired. Get Educated. Get Connected. October 2, 2017. Portsmouth, New Hampshire, USA. Abstract accepted; presentation pending.

Taylor, C., Dhaliwal, H., Laurin, L. (2017). Assessing Present And Future Impacts Of Providing International Development Support To Central American Smallholder Growers. Presented at LCA XVII: Get Inspired. Get Educated. Get Connected. October 2, 2017. Portsmouth, New Hampshire, USA. Abstract accepted; presentation pending.

Harris, H., Dhaliwal, H., Taylor, C., Laurin, L. (2017). Social and Environmental LCA and S-ROI (Sustainable Return on Investment) of a Government Grant for Food Crops in Guatemala (2017). Presented at CILCA 2017: VII International Conference on Life Cycle Assessment in Latin America. June 12th 2017. Medellín, Columbia. For more detail, please see <https://www.earthshiftglobal.com/resources/newsletter/lifecycle-impact-assessment-process-ocelot-webinar-cilca-2017-issst-presentations#Story 3>

Education

MS IN ENVIRONMENTAL POLICY | 2008 |
NEW JERSEY INSTITUTE OF TECHNOLOGY, NEWARK, NEW JERSEY
Master's Thesis: Sustainable Remediation of Contaminated Sites: A Life Cycle Assessment Approach

MS IN ENVIRONMENTAL MANAGEMENT | 2006 |
INDRAPRASTHA UNIVERSITY, DELHI, INDIA

BS IN BOTANY (HONORS) | 2004 |
MIRANDA HOUSE, UNIVERSITY OF DELHI, INDIA

Memberships

Society for Environmental Toxicology and Chemistry (SETAC); United Nations Environmental Program and Society for Environmental Toxicology and Chemistry (UNEP-SETAC) Life Cycle Initiative.

LinkedIn profile: <https://www.linkedin.com/in/harnoor-dhaliwal-7b6142b/>



About EarthShift Global

Since our founding in 2000, EarthShift Global has pursued a simple mission: to partner with our clients and help them effect change that advances their organizations' specific sustainability goals.

When you work with EarthShift Global, you get direct access to distinguished sustainability experts who've won praise (and repeat business) from clients like GE, Dow Chemical, YFY Jupiter, and the US Department of State. In addition to developing our widely used software for life cycle assessment and packaging lifecycle evaluation, they've helped establish international standards and practices, and trained many of the world's leading sustainability consultants.

EarthShift Global's team helps top-level executives, front-line practitioners, academic researchers and policymakers worldwide achieve their objectives by providing software, consulting services, and training that de-mystify the path to sustainability. Our proven approach emphasizes engagement, adaptability and credible, measurable results, and the incorporation of performance-enhancing sustainable thinking into everyday business decisions.

We're proud that our **LCA and S-ROI software, training programs and consulting services** are all designed to help our clients build far-reaching capabilities of their own, leveraging solid data to reach reliable conclusions. We take great satisfaction in helping sustainability professionals get better at developing research, analyses and recommendations that can withstand the most intense scrutiny.

This is essential for winning the trust and participation of internal and external stakeholders, cultivating sustainability-oriented thinking across your organization, and influencing and optimizing your supply chain.

At the same time, the rigorously data-driven EarthShift Global approach ensures that your environmental sustainability marketing efforts are supported by credible science. You can build your brand with confidence, and compete effectively with rivals with no accusations of "greenwashing," optimizing the return on your sustainability investments.

Effective implementation is a central value for EarthShift Global, because we want to help organizations establish better relationships with the world and its natural resources. We're resolutely practical, but we're also motivated by our own personal values and aspirations, because in this particular area self-interest, business interests, and societal interests quickly become indistinguishable.

Client References

- Bill Flanagan of General Electric (518) 387-5070 flanagan@ge.com
- Ron Allen of YFY Inc. (816) 841-7999 ronald.allen@yfyjupiter.com
- Warren Boelhouwer of OTR Wheel (706) 252-8610 warren.boelhouwer@otrwheel.com
- Todd Krieger of DuPont (302) 774-1026 todd.m.krieger@usa.dupont.com

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