

a green**futures** Special Edition

Published by
 **forum** for
the **future**



FUTURISTAS

WHY WOMEN ARE CRUCIAL TO CHANGE

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'Futuristas' shows why women are crucial to the changes we must make to achieve healthy lives in resilient economies. We begin with the business case: the fact that firms that promote women are both more profitable and better equipped to adapt to a rapidly changing world. In the following pages, we explore the role of women in developing new solutions in science, enterprise and the food system – and as skilled professionals, producers, consumers and carers.

In all of these roles, women represent four essential tools for a sustainable future:
Influence: women have the spending power to drive change in corporations and households
Investment: women invest in the long term for their families, leading to greater social benefit
Innovation: women bring new approaches to challenges in healthcare, utilities, energy and food
Implementation: women build strong networks and drive change through collaboration.

Why women and sustainability?

Four contrasting approaches to a crucial question.



To promote collaboration over conflict

The progress of women into positions of real power, in any sector, remains criminally slow. Where this lack of what the *New York Times* sweetly calls the “distinctive social skills” of women becomes downright dangerous is their absence from leadership roles in conflict resolution and peace maintenance. Women’s broader view of peace – including basic rights, education and healthcare – actually works better on the ground than the more ‘macho’ focus on conflict resolution, formal governance and infrastructure. But when it comes to negotiating and signing major peace treaties, women are excluded. With growing pressure on water and food, bringing more women into positions of power seems the best way to ensure that collaboration, not conflict, becomes the norm. *Sara Parkin is Founder Director, Forum for the Future.*

To meet our need for skills

According to EngineeringUK, the number of economically active 16 to 64 year olds is set to fall by 6% between 2010 and 2035, while the proportion of the UK population over the age of retirement will grow to 23%. We need to be creative in meeting the need for skilled professionals. With women currently accounting for just 8.7% of the UK’s professional engineers, women represent a tremendous source of untapped potential. We have to ensure a healthy pipeline of girls studying Science, Technology, Engineering and Maths (STEM) subjects at school, and reduce the numbers of suitably qualified women who choose not to work in engineering to ensure we have the skills to build a sustainable future. *Jon Prichard is CEO, Engineering Council.*



To help new ideas emerge

Women and sustainability is a deceptively complex area. It would be nice to be able to argue that were there more women in decision-making situations, then there would be greater and faster movement towards sustainability. There is a large and contentious debate about whether women are more likely to act sustainably than men. Arguments exist on both sides. Male dominance in religion, politics, business and finance is still the norm, and it leads to a narrow range of behaviour, attitudes, language and practices in those areas. Better representation for women would likely change ways of thinking, potentially cracking open established norms, hopefully in a good way. *Catherine Mitchell is Professor of Energy Policy, University of Exeter.*

To build healthy communities

Sustainability falls to the people doing the work, whether or not they are elected to do it. It’s the women who do the work when it comes to families and communities. It’s clear to me that creating opportunities for women to work strategically is incredibly important. Real estate development is my focus at the moment. We need holistic models that recognise economic diversity within the community, but also provide a sense of aspiration for the people who live there. *Marjora Carter is Founder, Sustainable South Bronx.*



They're worth it

Oliver Balch makes the business case for valuing women.

“Gender equality in business is smart economics.” This isn’t the verdict of a rights campaigner. The words belong to Robert Zoellick, former president of the World Bank. Most of his five-year mandate was dedicated to getting the global economy back on track. Women, he insists, need to be a fundamental part of that story.

Something interesting is going on in the debate around women in business. For decades, it was all about rights. Rights to fair pay. Rights not to be harassed. Rights to maternity benefits. This hasn’t gone away, and nor should it. Despite some notable advances, the world of work remains predominately ‘pale, male and stale’. An average of one in ten of the world’s board seats have women sitting in them, according to a recent study by GMI Ratings. The pick of the bunch tend to be in Europe: in Norway, one third of director positions are held by women.

While the rights agenda hasn’t gone away, today we are seeing a new line of argument: the business case. Corporate Inc has some stellar individual female leaders. TJX’s Carol Meyrowitz, DuPont’s Ellen Kullman and Iqoredion’s Ilene Gordon have all seen their companies’ stock price double since taking charge. However, it’s the collective influence of women in the workforce that really packs a punch. Fortune 500 firms with reputations for promoting women are shown to be between 18% and 69% more profitable than their less female-friendly peers, a widely cited 19-year study by Professor Roy Adler of Pepperdine University discovered.

Investing in women makes sense for companies at many levels. It comes down to valuing the individual employee, argues the advocacy group Opportunities Now: “Organisations that can attract the right mix of skilled employees will be best placed to compete in the new business environment.” In bottom-line terms, that translates into increased productivity, greater innovation, lower absentee rates, better retention, high quality recruitment, and the like.

Expand the focus from individual companies and the macro-economic picture looks equally compelling. Greater participation of women in the workplace would result in a GDP rise of 9% and 13% in the US and Europe respectively, according to research cited by the Women Investing in Women Initiative, a project of the social and economic impact investors Calvert Foundation. In North Africa and the Middle East, among the poorest performers in terms of female labour participation, the rise in GDP could be 25%.

This isn’t just theory. Nor is it plain economics. Marilou van Golstein Brouwers, Head of Microfinance at Triodos Bank, can testify to the wider social impacts of investing in women. For the best part of two decades, she has been helping women access credit so they can build their own enterprises. “If you invest in a woman and she has a good business,

then her whole family thrives”, she notes. Why? Because women typically spend more of their income on household consumption than their menfolk. The families of female-led microenterprises are more likely to be healthier, better fed and more educated, according to the International Labour Organisation.

Where investing in women gets really interesting is in response to the ‘what next?’ question. Diversity, as far as contemporary business goes, has to be a good thing. Capitalism in its current form – mostly made and managed by men – has arguably run its natural course. Companies must learn to prosper in a more resource-constrained world. That requires balance. Cue more ‘feminine values’. Tomorrow’s successful businesses will need to beef up in areas such as emotional intelligence, cooperation, holistic thinking and intuition skills, says Danish-British business writer Tania Ellis. These characteristics are associated with women, but are not their exclusive preserve. Ellis is fond of citing Starbucks’ (male) CEO Howard Schultz, who describes his leadership style as “sensitive, passionate and responsive”. Nor should businesses exclude classic ‘masculine values’, such as action and competition. We need both, and so the more diverse the team is – not just in gender but in race, sexuality, abilities, nationality and faith – the better.

Ellis’ vision of a Yin-Yang hybrid of qualities is already beginning to manifest itself in the social enterprise boom. It is no coincidence that women are prominent protagonists in this emerging sector, says Triodos’ Golstein Brouwers. Science seems to back up the idea that women are generally less mono-focused and more socially and emotionally intelligent than their male counterparts [see ‘Emotional and Social Competency Inventory’, Hay Group, 2012]. This cannot but influence the way they see the world of work, concurs Lucy Carver, Director of Sky’s Bigger Picture programme. Women, she argues, “are interested in the large-scale impact of business, but also see the commercial opportunities that being socially responsible can provide, delivering value for both business and society.”

Getting the economy back on track can’t just mean a return to the ‘good old days’. A fundamental re-routing is needed. Let’s hope Zoellick has some female voices in his advisory team. If not, he’d better get hiring.

Oliver Balch is a freelance journalist specialising in the role of business in society.

Families of female-led microenterprises are likely to be **healthier, better fed and more educated.**

Fortune 500 firms with reputations for promoting women are **more profitable** than their peers.

More women in the workplace would result in a **GDP rise** of 9% and 13% in the US and Europe respectively.

Better balance, better business



Problem solvers

More women in science and technology could mean better solutions, finds **Katherine Rowland**.



Small hands, big imagination

Educational bias, workplace policies and lack of encouragement may go a long way to explaining why only 27% of scientific researchers worldwide are women. But while equity is reason enough to tackle the issue, the world may have a lot more to gain from a better balance.

"We have to ask what we are trying to achieve by recruiting

more women in science and engineering for sustainability", asserts medical doctor, architect and TED Fellow Rachel Armstrong of the University of Greenwich. "Is it just a matter of greater representation, or is it a matter of seeking women's influence in these disciplines?"

Armstrong's own work is driven by the need to find solutions for 21st century life. It's not just about industry, she argues: it's about reimagining human identity. "We need new answers for urban spaces and the way we use resources, especially as they become more constrained. Will introducing more women bring about that change?"

Quite possibly, says Jeremy Greenwood of Lafarge Readymix, a global leader in building materials. At the most basic level, he explains, bringing more women into STEM translates into increased diversity, leading to more innovative problem solving, and better results overall.

Others, including Armstrong, maintain that women display qualities which are needed in the field. "Women tend to facilitate, cooperate, nurture and orchestrate," says Armstrong. "Their approach is less 'top-down, fix the broken machine' than it is holistic and collaborative, a great asset in science and engineering."

Melissa Sterry, Head of Technology at Earth 2 Hub, concurs, pointing to the social roles women play by way of explanation: "As family members and mothers, women understand sustainability as a way of securing the future." For Sterry, yesterday's bias against women in STEM could even be today's advantage. "The time is now to make progress as a woman in science", she argues. "Yes, women have to push to be heard. When they introduce new and creative ideas, they're subject to more scrutiny, and so forced to look at issues more closely. This has a

powerful impact on building the future."

Whether the motivation is sustainability, diversity or research for its own sake, the question remains: how can we address STEM's gender gap?

Claire McNulty, Director of Science and Sustainability at the British Council, calls for a closer look at what could drive women to go into science, while addressing the perception that it's geeky and dull. "Science is about discovering new answers, from how the brain works to generating clean energy. We need to show that science can be applied to the issues that really make a difference," she says.

Indeed psychologist Amanda Diekmann of Miami University, Ohio, found that many women find science out of sync with their professional ambitions. "Women tend to have 'communal goals'", she says. "[They] want careers where they're helping others and solving social problems. The perception of science as a profession of lonely lab hours can be irreconcilable with women's aims when they want to engage with the world."

Are women more likely to pursue careers on the solutions side of science – just as they are more likely to assume leadership or managerial roles in companies with a focus on sustainability, rather than in general industry? Could better information about the application of science to real world issues help to raise the proportion of undergraduate applications from women to the Institute of Physics from the baseline of just 35% in 2011?

Silvia Giordani of Trinity College Dublin, who was recently awarded a L'Oréal-UNESCO fellowship for Women in Science, believes it could: "It's important to send the message to young women that science gives you tools to take on the world's problems."

For Carmel McQuaid, Climate Change Manager at Marks and Spencer, solving the world's problems can be a strong motivating factor for women who face conflicting pressures, she observes: "Women may find it easier to be happy with the career choices they make knowing that they're working to ensure clean air and water for future generations."

Nonetheless, having children or caring for elderly dependents often coincides with the opportunity for women to progress in science, business and in wider society, acknowledges McQuaid.

"Without access to affordable care, and to good role models and mentors, and without efforts to overcome real or perceived barriers", she warns, "we may fail to maximise the potential of women and their experience to drive change."

Katherine Rowland writes about health and the environment from New York.

Photos: istockphoto/thinkstock

Social skills

In the world of start-ups, women certainly aren't the weakest link, says **Charlotte Sankey**.

An entrepreneur walks around the slums of Kigali, Rwanda, calling on her neighbours. She is a 'Solar Sister', selling small, affordable solar-powered lamps to light people's homes, taking the place of toxic kerosene ones.

In Shanghai, Huang Ke approaches corporate sponsors with her vision of V-Roof volunteers greening up to 300,000 square metres of the city's rooftops.

In Gujarat, three artisans embroider patterns onto brightly coloured cloths for SEWA – a trade union that offers women training in business, design and leadership to help them set up their own enterprises.

In Swaziland, Sibongile Maseko, Production Manager at Quazi Design, watches over 20 women making striking pieces of jewellery from old magazines. Back at home, Maseko cooks for ten dependents, as well as her neighbours. And she offers training in business skills to other entrepreneurs in the community.

Maseko is one link in an impressive female chain of entrepreneurship. Quazi Design receives funding from the New York-based non-profit Nest, set up by Rebecca van Bergen, at the age of 24. Nest funds 15 artisan projects worldwide: Gujarat-based SEWA is also among them.

These social enterprises are just a few pixels in a sizeable picture. Worldwide, thousands of women are setting up businesses – small and large – that create jobs and deliver wider social and environmental benefits. Nor is it a new trend. Many of today's most successful ethical brands had visionary women at their roots: The Body Shop, Green and Blacks, People Tree... So what's driving them? The flexibility of running your own show is one attraction for women, research suggests. A study of small enterprises in Trinidad and Tobago by the International Labour Organization found that women there are attracted to activities which allow them to stay close to home, and which draw on skills acquired through the performance of 'traditional' roles.

Networking is one such skill, as illustrated by Maseko's story. Collaboration is another, or "the ability to co-exist with other people's egos", in the words of Juliet Davenport, Founder of Good Energy. A study by the British Chambers of Commerce, 'Achieving the Vision', found that women in the UK are nearly three times as likely to collaborate with research institutions than male-led businesses.

The same study also found that female entrepreneurs are more likely to offer a product or service that's unfamiliar to the market. Davenport is a case in point: her company was the first to offer electricity from 100% renewable sources to UK households ten years ago. Every so often, Davenport

pops in for a cup of tea and a chat with her customer care team, drawing on their experiences to find out what will persuade more consumers to buy her wares. Her willingness to listen and her appetite for innovation may seem unrelated – but they're not. As Sylvia Ann Hewlett, President and CEO, Center for Talent Innovation, argues, "If you have the power of different kinds of perspectives and backgrounds, you will create better decisions, discover opportunities to hit new markets, and create new products."

Marjora Carter, the urban regeneration strategist who founded Sustainable South Bronx, agrees. "I find, with very few exceptions, that when I give women particular projects to do and allow them to proceed in a way that they think they should – and not the way that I think they should – they generally take it as an enormous boost of confidence and encouragement."

Another attraction of social enterprise – for women, though not exclusively so – is its focus on long-term impacts, as opposed to short-term gains. Statistics show that women in business take fewer risks, favouring stability over profit potential.

"Women think about the future, and what sort of world is being created for future generations", remarks Theresa May, Home Secretary and former UK Minister for Women and Equalities. Carmel McQuaid, Climate Change Manager at Marks and Spencer, concurs. She finds women show a more patient approach to business, and are "willing to wait for a slower but better outcome".

'A better outcome' might not be a bigger surplus, as Christine Wilson, Head of Youth and Society at the British Council, found in her former role as a social enterprise advisor. She witnessed "extraordinary women doing extraordinary things", but found that they weren't "necessarily interested in scaling up".

"Women don't see their business as linear, but organic and circular", argues van Bergen, the founder of Nest. "It isn't something you grow to sell, with a beginning and end", she explains. "Above all, it tends to be focused on the networks you create."

Is this how women increase the impact of their work: by passing on the baton, rather than adding another inch to their own?

Charlotte Sankey runs the communications agency Creative Warehouse.

'A better outcome' might not be a bigger surplus

Patience meets precision: Quazi Design, Swaziland



Future seeds

Women are at the heart of the global food system, and hold the key to its future, finds **Sarah Lewis-Hammond**.

Judith Harry says that women are not supposed to be leaders, or at least that's what people think. She is a groundnut farmer in Mchinji, Malawi, and a single mother raising her teenage daughter and two teenage orphans. She is also the Chair of the Mchinji Area Small Holders Farmers Association (MASFA), a cooperative of smallholder farmers, and has overseen dramatic changes in her community.

When Harry began growing groundnuts, the vendors she sold to used loaded scales in order to pay too little for her crop. Fed up with the situation, she contacted the National Smallholder Farmers Association of Malawi, who subsequently helped the farmers of the town set up MASFA, which in turn partnered with fair trade organisations, including Twin Trading, to supply UK supermarkets with nuts. She now produces over four metric tonnes of nuts a year, and is paid appropriately.

For Harry, "becoming a chairperson of the association, which comprises women and men, acts as encouragement to other women to know that it is possible for women to be a leader of a group".

Across the developing world, around 43% of the agricultural workforce is female. Yet typically women have considerably less access to resources, such as credit, fertilisers or seeds, than their male equivalents, seriously diminishing their ability to produce food.

Closing this gender gap, the UN Food and Agriculture Organisation says, could increase the productivity of land being farmed by up to 30%, helping to feed a further 150 million hungry people.

Nor would additional crop yield be the only benefit. "With the fair trade premium, we have built a hospital for pregnant women and childbirth", explains Rosemary Kadzitcha, a peanut farmer with MASFA. And since it is typically women who send children to school, buy for the home and care for their neighbours, the more income they have, the better off their communities will be.

It sounds straightforward enough. But practical ideas to improve agriculture too often ignore the cultural factors at the root of the problem, says Liz Hosken of the Gaia Foundation, an organisation that works to "regenerate cultural and biological diversity". One example is the arrival of cash crops, which meant that the land women used to grow food for their families passed to the hands of men. Communities became dependent on growing crops to get cash to buy food, which is ok as long as the crops flourish and sell, and there is food to buy...

In Kamburu, Kenya, Hosken explains, families began growing tea out of desperation for money, but then price fluctuations and drought meant they had no income, and because they had given over all their land for tea, there was no food. The Gaia Foundation

and Institute for Culture and Ecology helped families put their own food into production again. Along the way, they discovered that the older women in the community had a huge amount of knowledge about agricultural systems and seeds, but that this resource had been sidelined. Fortunately it wasn't too late: "The men in the community demarcated more land for the women because they realised that they would grow critical nutritional crops. It's the start of a shift: people are recognising the importance of the role of women."

Mpatheleni Makaulule is the founder of The Mupo Foundation, which works to preserve and revive cultural diversity in South Africa, and also works in collaboration with the Gaia Foundation and the African Biodiversity Network. She explains the fundamental relationship of women to seed, the source of all food crops, among her people – the VhaVenda tribe of northern South Africa: "When the seed is going to be planted, it's the women who select the seed. It's the women who store that seed. It's the women who take that seed out of storage and give it to others to go to plant. When the seed is germinating, it's the women who take care of it. Seed is sacred: it's our connection to the creator. In our custom, women are the mediator between us and the creator. When we connect to our creator, the seed, land and water are the elements which connect us. The elder women have to take care of the seed until it is harvested. When a baby is born, women gather seed for the ceremony."

While a return to traditional gender roles may sound regressive, Christine Wilson, Head of Youth and Society at the British Council, maintains that it's important to work with the strengths of a community, and not against them. "We have to be realistic", she says. "In the majority of homes around the world, women do still hold the predominately caring role and are leaders of the family. I think that's where the power lies, and it should be used to great advantage."

The potential, says Louise Nicholls, Head of Responsible Sourcing in Foods for Marks and Spencer, is not just local change but a real shift in the food system. "Women tend to see issues holistically", she argues. "They take action not just in workplace but at home and in the wider community. Empowering women through education, healthcare and equal access to resources enables more rapid and more sustainable change."

Oxfam works with private sector partners to show that addressing equality issues can lead to higher returns. For example, when the Colombian dairy company Alpina wanted to improve the quality of its raw milk, Oxfam demonstrated that women were responsible for cleaning the utensils on the farms in its supply chain. Alpina agreed to invest in hygiene training, formalising their role in quality control. This increased the women's income and led to an increased marginal return for the company.

As Nicholls maintains: "We need women playing a role at all levels, from product development to government policy – alongside their role as consumers, making choices for themselves and their families. Many women do not realise the huge impact they could have on society and the environment."

Sarah Lewis-Hammond is freelance journalist specialising in food and energy.

We have to work with the strengths of a community, not against them



Farming for the next generation: Rosmary Kadzitcha, MASFA

Purse strings

Single mums lead on green spend

Figures from Unilever show that women globally control nearly \$12 trillion of an overall \$18.4 trillion in consumer spending – more than the GDPs of Brazil, Russia, India and China combined. With the right combination of educational campaigns and good design, their shopping habits could do a lot to check carbon emissions.

The assumption that a domestic role is a politically passive one needs to change, argues Servane Mouazan, the founder of the social innovation network Ogunté. "Women have to know that they hold the power of positive influence in their hand and that they can challenge assumptions", she says.

Women are leading the way on green spending habits. An EMAP survey found them 12% more likely than men to buy environmentally friendly products and services, and 10% more likely to pay attention to what companies said about their environmental impact. Another survey by the UK's National Federation of Women's Institutes and the Women's Environmental Network found that 86% want to see manufacturers design more environmentally friendly products, and 85% want to see carbon labelling on products. Studies in Sweden have shown that the social group most concerned with green purchasing and eco-labelling is single mothers.

This game-changing potential has been spotted by the US marketing agency The Mom Complex, which refers to mothers as "the most powerful audience on the planet". However, according to its research, three out of four 'moms' feel misunderstood by marketers. Katherine Wintsch, the company's founder, talks about 'Mom 3.0': "a millennial woman who is more comfortable being imperfect". Unlike the domestic angels of many cleaning product ads, she has a sink filled with dirty dishes and likes to go clubbing.

The Motherhood Creative, a consultancy which began as a blog by two moms in New York, is working with leading domestic brands to build better relationships with this audience. Its interactive website includes talks on topics such as how to make a quality meal without forking out for meat, and then get the kids to help with dishes.

The potential is vast, says Forum for the Future's consumer change expert Sally Uren: "Brands and marketing managers need to recognise women's power as drivers for environmental change, and engage the mainstream." – *Laura Hall and Isabel Sloman*



Futuristas is a *Green Futures* Special Edition, produced in association with the British Council and Marks and Spencer.

Editor: Anna Simpson
Editorial Assistant: David Hewitt
Production: Katie Shaw and Ulrike Stein
Design: The Urban Ant Ltd

With thanks to Jenny Hammond,
Kyla Mandel, Isabel Sloman and
Polly Wheldon

Printed by Pureprint, using
their environmental technology
and vegetable-based inks, on
100% recycled and FSC certified
Cocoon Silk paper, supplied by
Arjowiggins Graphic.

Published January 2013.
© *Green Futures*
Reg charity no. 1040519
Company no. 2959712
VAT reg. no. 677 7475 70

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