

SABITA smokes 20 cigarettes a day, and not on the sly. She has one square meal spread over three days and does a half marathon every day, part of it carrying weights as heavy as 10 kg. She looks much younger than her years.

SO, is she a size-0 anorexic gym-hitting model that every third urban teen is waiting to turn into? Sabita, in fact, is just 11 years old but doesn't look a day over nine. While most of her urban counterparts are close to attaining puberty, she still sports the body of a child that is a long way from adolescence. If you haven't heard of her, it's because she isn't famous.

But Sabita is every other girl in the most backward areas who has been denied schooling so she can help her mother. Her weightlifting and marathon are the increasingly lengthening treks to fetch fuel and water. Her cigarettes come from the long hours cooking over a smoky chulha for the family. She gets to eat if and when there is something left over after the menfolk have eaten. And these are privileges when the going is good.

Drought, floods, famine, epidemics, pollution of soil, water or air – all these make the going even tougher. Her lifestyle ensures that undernourishment keeps her looking smaller than her years as milestones like puberty are delayed. The same circumstances, coupled with the burden of several pregnancies, will ensure she looks and feels far older than her years a decade down the line – if her environment lets her live that long.

Women's lives, particularly in the Third World, are so intimately interwoven in innumerable ways with environmental realities that changes and degradation have an immediate and far-reaching impact on their lives directly and indirectly. They play a major role in income-generating activities like farming, fishing, selling the produce as well as domestic tasks like cooking, gathering fuel and fodder, looking after children and the elderly. Every environmental change or crisis comes bundled with class-gender effects that include an increase in the workload, hardship and deprivations suffered by women, along with an inversely unfair decrease in return or benefits.

Sustainable development demands the recognition and incorporation of these in any programme or policy that purports to address issues of environment and grassroots development.

While the metrosexual man is seen cooking, cleaning and tending to baby with a smile, the reality for a large majority of women is completely different. As you descend the economy ladder, the gender divide in chores becomes more marked. As the urban signs of convenience — like refrigerators, gas stoves, electricity — begin to disappear lower down the economic scale, so does the man's share in "domestic chores". In fact, the woman's presence begins to increase not only in running the house and caretaking activities, but she is increasingly brought in to share the breadwinning burden by lending a hand in agriculture and animal husbandry.

A woman at the bottom of this heap (below a level you don't descend slowly – you just drop to sheer misery) whether she is eight or 80, pregnant, nursing or sick, has to ensure that her family and its animals have food to eat and water to drink. If the husband has migrated in search of a job, she has to till the fields and manage debts too. And, if possible, consider additional employment as well. Since ensuring food on the plate is a woman's responsibility, all associated activities also become her responsibility – from procuring the grains, meat and farm

produce, getting fuel and water and ensuring that the whole exercise is done in time, no matter what it costs her. Deforestation makes it more time-consuming as she trudges through longer and more difficult terrain to collect fuel. It could mean hours gathering twigs, preparing and making use of cowdung or, in harder times, dry leaves and vegetable and farm waste. It could mean unending treks for water, more exhausting hours of cooking and cleaning and dragging out her daughters from school to help her do all this.

Since receding forest cover directly impacts the quantity and nearness to water, fuel and fodder, the energy expended in direct agricultural activity compared to energy expended in fodder and fuel collection decreases every year as women have to go further and further to gather wood and water. This will force more girls out of school to help at home, lead to harder work, poorer economic returns and steadily worsening nutrition and health. A vicious circle that will push women deeper into poverty.

So it is not surprising that women pay a greater price when environmental degradation takes place. Deforestation, water scarcity, soil degradation, exposure to agricultural and industrial chemicals and organic pollutants. They all affect women's workloads, productivity, nutrition and health.

In most rural areas, females spend more than seven times as many hours in wood and water collection as males. A World Health Organisation estimate says that the energy used to carry water may consume over one-third of a woman's daily calorie intake. Coupled with poor access to sufficient food, malnourishment is an inevitability. Cooking on chulhas, which consume too much fuel and emit hazardous smoke, affects women and children in particular. Indoor air pollution kills more women in developing countries than does atmospheric pollution. One of the reasons biomass energy has received so little attention in national energy planning is that it is seen as "women's fuel".

The order of fuels on the energy ladder corresponds to their efficiency (ie, the fraction of energy released from the carrier that is actually turned into an energy service by the end-use device) and their "cleanliness". For example, the efficiencies of firewood, kerosene and gas are roughly 15, 50 and 65 per cent respectively. Therefore, moving up the energy ladder results in declining emissions of carbon dioxide, sulphur dioxide and particulates. The use of biomass has a negative impact on the health of household members, especially when it is burned indoors without either a proper stove or a chimney to let the smoke outside. Biomass fuels account for 80 per cent of all household fuel consumption in poor and rural areas.

America's Environmental Protection Agency estimates that wood smoke is 12 times more carcinogenic than tobacco smoke and it attacks the body cells 40 times longer than tobacco smoke. A fireplace burning four kilograms of wood for an hour generates 4,300 times more carcinogenic particles than 30 cigarettes. A chulha is 500 times more polluting than an oil burner and 1,000 times more than heating with gas! Cooking on a chulha calls for burning one kilogram of wood per person. Every kilogram emits 129 mg of carbon monoxide, while a cigarette emits only 58.8 mg (so that's where Sabita's smoking comes from).

A family's nutrition also suffers when wood shortages force it to economise on fuel by shifting to foods that are raw or by partially cooked; these can often be toxic, especially if from animal sources. Or eating leftovers that spoil easily in a tropical climate; or by foregoing meals altogether. Women and girls suffer the most since in most places they eat last and the least. Women are more exposed to the hazards of polluted water than men. They are not only the primary carriers of water, but they wash clothes and utensils, bathe the children and cattle — the poor mostly with polluted water.

When firewood is scarce, people switch from using logs to little twigs and branches, then they move to crop residues, cowdung and even dry leaves. This reduces the dung available for manure. Those that can afford it, switch to chemical pesticides, leading to a whole new batch of problems for man and beast from exposure. Women's unique biology renders them and the children they breastfeed more vulnerable to the poisonous effects of pesticides.

Exposure to certain agricultural and industrial chemicals and organic pollutants, especially as a result of shifting to chemical fertilisers and pesticides from conventional options like cowdung and dry leaves (which are increasingly used as fuel to save time and effort spent in travelling long distances to gather wood) increases women's vulnerability in pregnancy and childbirth as well as to diseases among adolescent girls. More and more girls exposed to such situations of undernourishment and pollutants attain puberty and appropriate growth late.

Moreover, since childcare is primarily the woman's responsibility, when children get infected, women are more likely to catch the disease.

As food becomes scarce during extreme conditions like drought, men migrate to towns, but the women are left behind with the children and the old. Very often men find new partners and abandon the women they have left behind. Households where women are the sole bread earners tend to be poorer. This is a worldwide phenomenon and one of the factors why 70 per cent of the world's poor are women. According to agricultural scientist Dr MS Swaminathan, women are the sole or chief breadwinners in 25 per cent of poverty-stricken families. And the whole cycle is repeated.

The downgrading consequences of increased environmental degradation on children raises numerous questions about the nature of schooling programmes needed in areas suffering from ecological damage. Most rural schools show low female enrollment and high female dropout – particularly in those seasons when the cumulative burden of work at home and in the fields is very high. Merely providing schools even within easy reach, even with sops like free meals and uniforms, is not enough since a heavy workload on the mother means the daughter is deprived of education even if there is a school nearby.

While protecting the environment, making food, fuel, water and fodder easily available is an important political agenda as a long-term mission to improve the lot of women and raise literacy levels. Equally important, in the immediate future, is to tailor the school format in keeping with the local agro-calendar to give girls some time off to help their mothers, especially during the months when the workload is high.

The gender specificity of these effects stems from pre-existing gender inequalities in the division of labour. These in turn impact the distribution of subsistence resources, access to assets, income-earning opportunities and participation in public decision-making forums.

Women's active participation in forest protection and wasteland development schemes ensures success and promotes gender equity, increases women's participation in public decision-making bodies, enhances their bargaining power within and outside the household and contributes to their overall empowerment.

Women's absence from policy-making bodies limits their influence over governance.

Worldwide, women hold less than 20 per cent of seats in government. And though women are keenly affected by environmental degradation, they are rarely involved in policy decisions at the local and national levels. This limited participation means those women's perspectives, vulnerabilities, risks, needs, knowledge and best solutions are often ignored. Failure to take into account women's activities and to include them in the decision-making process can lead to policies that trivialise, marginalise or even criminalise their activities without understanding or

meeting their needs. For instance, restricting the use of water bodies for washing and cleaning, or banning the collection of fuel and fodder from forests or adjoining areas without understanding and addressing accessibility needs of the women often ends in creating petty crime and exploitation. Women need official channels to reflect their needs and acquire a voice in environmental decision-making.

The World Bank recently decided to rate all of its projects for their effects on women and girls, as studies have shown that gender equality reduces poverty, supports economic growth, encourages good governance and promotes better quality of life. Any effort at sustainable development can only be meaningful when there is a discernible benefit for the last man standing. In this instance, the last woman.

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HER STORY



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