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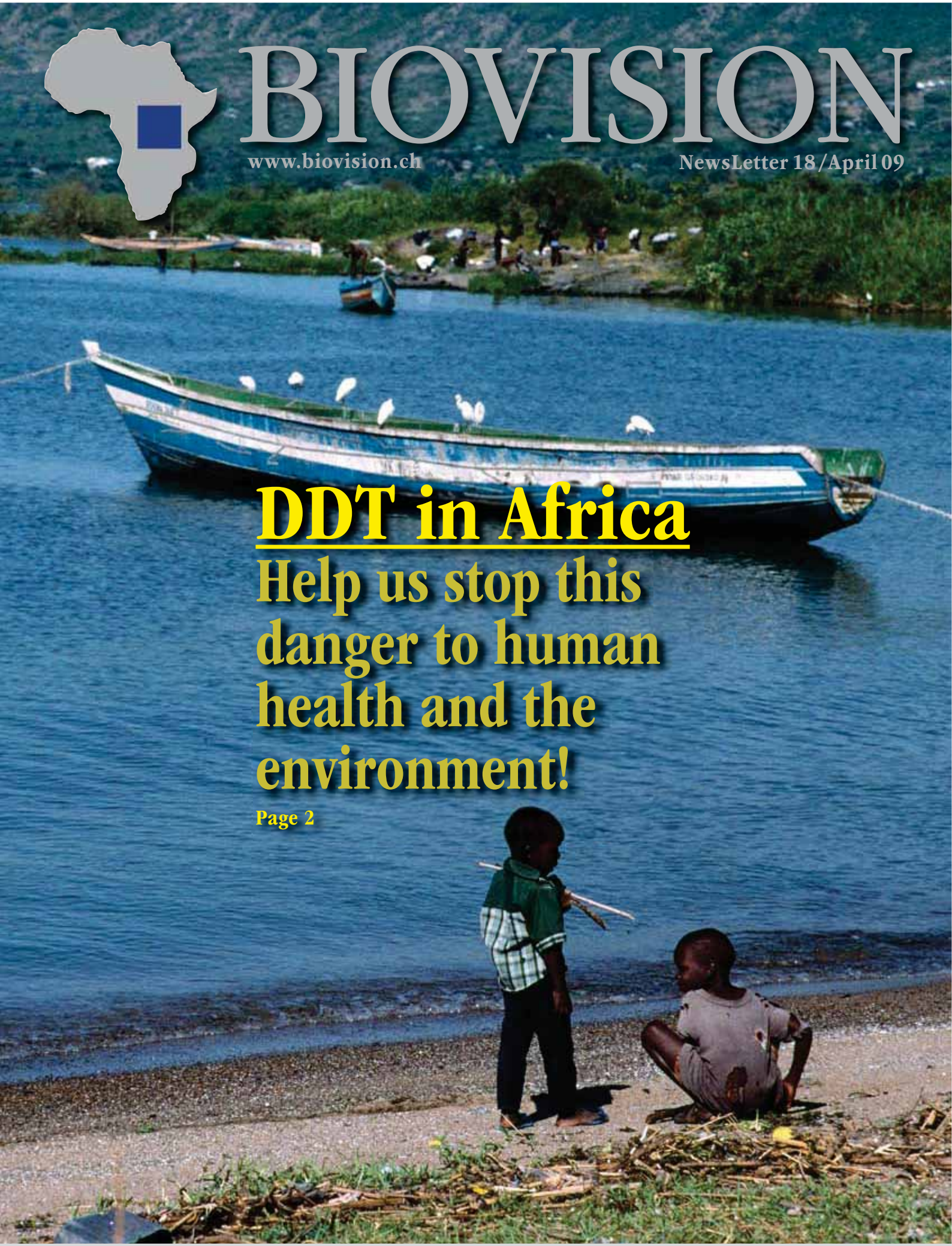

DDT in Africa

Help us stop this danger to human health and the environment!

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DDT in Africa

BioVision fights the return of this environmental pollutant

By Charlotte Walser, InfoSüd

Hans Rudolf Herren is outraged: „It is a scandal that DDT is being used again in developing countries, because it is reputedly cheap", says the president of BioVision. „It just would not even enter the question for us. And what is bad for us cannot be good for others!" As food for thought, the president of the Swiss BioVision Foundation reminds us that the insecticide is banned for good reason. DDT undermines efforts towards sustainable agriculture, damages human and animal health, and contributes nothing to the long-term fight against malaria. Random sampling has already shown resistance to DDT in malaria mosquitoes.

From battling the cockchafer to dying birds

Dichlordiphenyltrichlorethan (DDT), before its prohibition, was viewed as a miracle substance for agriculture and control of disease-transmitting insects. At the beginning of the 1950s, aeroplanes dusted huge swathes of land with the insecticide. In Switzerland, these flights went down in history as the ‚cockchafer war'. It was the Swiss citizen Paul Hermann Müller who discovered the insecticidal effect of the substance and who subsequently received the Nobel Prize for his discovery.
It was not long before there began to be evidence of the risks and side effects. DDT accumulates in body tissues, and the products of its degradation have similar effects to those produced by hormones. The substance was suspected of being carcinogenic. And it was not just dangerous to human health: birds laid eggs with shells that were too thin and in areas with a high level of DDT they literally fell from the skies.

During the 1970s, DDT was sprayed without thought. Now, use of DDT is forbidden in all industrialised countries.

Poison or lifesaver?

At the beginning of the 1970s, DDT was banned in most industrialised countries. In 2001 the Stockholm Convention came into effect; an international agreement on the prohibition of organic poisons which accumulate in the environment, including DDT . The treaty made the use of DDT possible only in justified, exceptional cases to control the mosquitoes that transmit malaria, provided there were no effective, affordable alternatives available.
The Convention is currently recognised by 162 countries but not, however, by the USA. „The tragedy of malaria in Africa must provide the political pressure to bring about change in the international rules on global protection for health and the environment," declares Paul Saoke, director of Doctors for Social Responsibility in Kenya.
The lobby of the DDT supporters received reinforcement from the World Health Organisation (WHO), which suddenly expressly approved the use of DDT in households in 2006. Thus walls of huts and houses were sprayed with a suspension of DDT, intended to repel or exterminate mosquitoes, although later WHO explained its support for the goal of replacing DDT use with other measures in the fight against malaria. However, others, especially the USA, have used the position of WHO to preach the use of DDT. The Bush administration allocated millions of dollars for this within the framework of the ‚Presidential Malaria Initiative'.

BioVision says no to DDT

The BioVision Foundation has for years been engaged in a positive campaign for malaria control using ecologically sound methods. The problem is tackled at its root in that the disease transmitters are organically controlled even in their breeding sites. The projects supported by BioVision prove that malaria mosquitoes, and thereby cases of the malaria disease can be drastically reduced using environmentally friendly methods.
The BioVision Foundation decisively rejects the use of DDT; in malaria control also.DDT is perilous for both humans and the environment, and endangers biodiversity. Additionally, it has been proven that malaria mosquitoes are becoming resistant and thus that the use of this insecticide can offer no sustainable solution.
BioVision calls on all states to promote alternatives to DDT and to actively support environmentally compatible methods of malaria control.

www.biovision.ch/Malaria

At present, 14 African states acknowledge their use, or plans to use DDT in combatting malaria, among them South Africa, Zambia, Zimbabwe, Mozambique, Gambia, Namibia and Ethiopia.

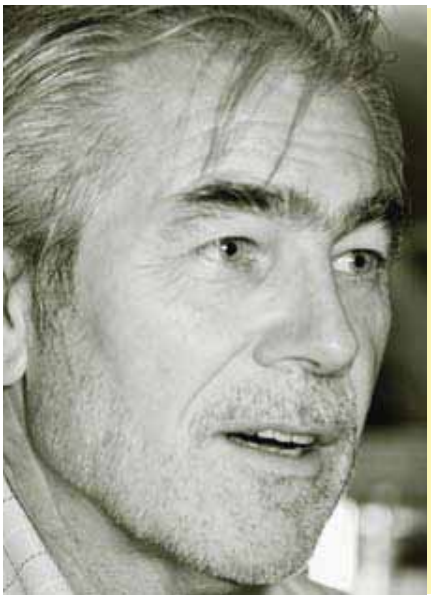
Supporters of DDT maintain that use of the insecticide in the fight against malaria can save lives. They emphasise that a low dosage in household sprays would cause no ill effects. Paul Saoke cautions against this and refers to the latest health studies in countries such as South Africa. These studies make it ever clearer that DDT even in small doses in an interior setting can pose a threat to inhabitants, which manifests itself especially in newborns. Use of DDT is even more questionable since malaria can be combatted successfully using methods harmless to health and the environment. Hans Rudolf Herren continually points this out: „Producing and importing DDT to developing countries for

Every day 3000 children die from the effects of malaria.

use in malaria prevention is not the answer. Improper use in agriculture is sure to follow", says the recognised scientist, and and warns „ We have enough proof that the problem of malaria cannot be solved with this insecticide. Quite the opposite – the whole situation actually becomes even worse!"

Misuse is inevitable

In reality, limitation of DDT use in many countries to controlled application in household rooms is an illusion. In Mozambique, DDT is already seen as a replacement for mosquito nets. The more DDT is in circulation, the greater the danger that it will be utilised in agriculture, and that could be catastrophic for the economies of affected states: under certain conditions they could no longer export their products. The World Trade Organisation allows for import protection against products with DDT residue, therefore many experts suspect that the USA and other industrialised countries are also following an economic and political agenda in advocating the use of DDT. DDT residue is a useful reason for keeping products from developing countries off the market.



Lack of cost transparency for DDT

The argument that DDT is the cheaper solution simply ignores the risks and consequences for health, the environment, and the export of agricultural produce. Additionally, the cost of controlled handling and safe disposal of DDT stockpiles has not been calculated. „If we use the methods available for sustainable strategies in malaria control, we can protect people and conquer the disease without danger to humans, the environment or huge consequential costs", says Hans Rudolf Herren.

Alarming numbers

There already exist details of its agricultural application at present, such as written by the secretariat of the Stockholm Convention in Genf in its report of autumn 2008. And yet an increasing number of states are introducing DDT without being able to guarantee effective controls and correct usage. According to the report, 4000 to 5000 tonnes of DDT are used annually worldwide; a trend that is growing. India is the main manufacturer, and there production increased 50% between 2005 and 2007.
Stockpiles of DDT are growing too, and often there are no current statistics available, which makes it difficult for the appropriate international bodies to exercise control. The most recent reports from Mozambique, for example, date back to 2005. At that time 308 tonnes of DDT were stockpiled in the country.
The search for alternatives is ‚urgent and crucial' states the current Stockholm Report. In past years these alternatives were pushed aside by DDT. The member states of the Stockholm Convention are meeting at a conference in Genf in May 2009, and for the first time the list of persistent organic pollutants (POPs) will be completed. How the ban can be enforced will also be discussed. Experts have already examined the case of DDT at a preparatory conference last November. Those taking part – among them representatives of BioVision from Switzerland and Kenya- have developed a business plan to promote environmentally friendly alternatives to DDT.

Organic, not chemical methods

Projects supported by BioVision in Kenya prove that there are environmentally friendly ways to combat malaria. Together with the international insect research institute icipe, BioVision carries out numerous projects in areas of Africa afflicted by malaria, covering more than 100,000 affected people. The people are informed of the danger presented by mosquitoes and are included in the elimination of breeding sites. Through a combination of various methods – treatment of stagnant bodies of water (breeding sites) with environmentally friendly Bti (Bacillus thuringiensis israelensis), distribution of bed nets and treatment of the malaria disease itself – the deadly cycle between human and mosquito can be broken. The approach used by BioVision and icipe is effective: malaria infection rates in the project areas fell dramatically within two years. In Nyabondo (Kenya), for exam-

Prominent victims of biocides: In 1970 th peregrine flacon was practically wiped out in Switzerland. After the ban on DDT the population began to recover, and today over 200 pairs are breeding in Switzerland.

Project News

Victories and stumbling blocks in West Pokot, Kenya

By Peter Lüthi

Cabesi stands for *Camels, Bees and Silk*. In the last five years this multi-faceted project has developed many activities with the aim of improving lives full of hardship through new opportunities for income while at the same time conserving the delicate environment. Droughts are common in this region. The soil and sparse vegetation are threatened by overgrazing, deforestation and erosion. Cabesi is counteracting this trend by promoting environmentally sound enterprises such as the production of honey, wild silk, sun-dried mango chips or small-scale cultivation of jatropha plants to produce lamp oil for home consumption. The products are processed, packed and sold at the newly-built ‚Cabesi Marketplace'. The project activities are adapted to the needs of the local people. Thus ‚Malaria Clubs' were set up, which inform schools and villages on the causes and prevention of malaria through plays and songs. In the ‚Camels' component of the project, Pokot semi-nomads are educated so that they no longer see their camels just as producers of meat and milk, but also as beasts of burden in this wide and pathless place.

New perspectives and a new sense of self-confidence for Pokot women: Mary Kamewun, from Lomut, wants to buy a nanny goat with the profits from her honey production.

Emancipation of women in a man's world

Rolf Gloor, project leader in West Pokot: „Cabesi is also a social project, one that concerns old Pokot traditions such as the marriage of young girls or the oppression and circumcision of women." Cabesi helps many people survive and gives them prospects for the future. This is especially true for women who not least for reasons of tradition do not reach their full potential. Through the project they get the opportunity to make some money. „Lots of women leapt at the chance", reports Gloor. „After training in beekeeping and the processing and sale of honey and wax, they earn their own money for the first time in their lives." Up to now, all money-earning activities were carried out by men. In contrast to many patriarchs who spend money readily, women mostly invest in the improvement of their lives. With the profits from honey they bought a nanny goat as the basis for their own small herd. Now they are producing milk and meat for home consumption. The women earn additional income through the sale of surplus products at the local market.

But is it not questionable to undermine old traditions through the project, and so change social structures?

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ple, cases of malaria among children under five fell from 60 to 20%. And in Mwea (Kenya) the infection rate among schoolchildren fell from 38% to almost zero.

The recipe for success lies in co-operation with those affected, says project leader Charles Mbogo. There is no such thing as a ‚once and for all solution' for malaria. The Kenyan scientist advocates that malaria control should be integrated into the health concept in the same way as control of disease-transmitting insects is a fixed component of healthcare in industrialised nations. Mbogo will present alternatives to DDT together with BioVision at the Stockholm Conference. ■

Impregnated bed nets are distributed as a priority to pregnant women and small children, as they are by far the most severely threatened by malaria.

Mercy Kiyapyap, project assistant of many years and member of the Pokot people herself, does not hesitate one second in answering: „This is about observing human rights, which supersede tradition! And we Pokot women are human too!“

Testing new ideas

Last year, 500 participating beekeepers produced 25 tonnes of honey and 2 tonnes of wax. The produce was collected in five newly-built honey centres and filtered at the marketplace, bottled or made into candles and sold. At times demand far exceeded supply, which succeeded in opening up various markets for these high-quality products.

Despite this, head of project Gloor remains self-critical. „We have unfortunately been unsuccessful in establishing the camel as a means of transport in West Pokot“, he states. He sees a reason for this in that supervision of the camel stockmen is so difficult. The project area is 9100 km2 ; nearly a quarter the size of Switzerland and is inaccessible. „Many of our camel stockmen cannot be reached during the rainy season“, says Gloor. „There are hardly any roads. Some people live in such isolated places that even the best all-terrain vehicle in optimum conditions would not survive the journey undamaged.“

The use of camels as beasts of burden was a good idea that was tested within the framework of the pilot project. In the course of mutual teaching and learning between the participants and the project team, it was finally agreed that priority be placed on the production of honey and silk and on malaria control. ■

▲ *In Project Cabesi, intensive courses on camel care and training for transport camels are carried out.*

◀ *Rolf Gloor, head of the Cabesi project, explains the use of modern beehives with honeycomb frames.*

◀ *The aim of the Cabesi Project is generation of new sources of income for local people and conservation of the delicate environment.*

Commentary

Mercy Kiyapyap, Cabesi Project assistant in West Pokot, Kenya

Tradition versus modernisation

The promotion of camels as beasts of burden in west Pokot should contribute to relieving women from endlessly carrying heavy loads. Securing nutrition could also be improved by setting up and supplying local markets in the most remote regions. Camels feed on acacia leaves and spare the delicate vegetation. They are much more resistant to drought than cattle and do not add to erosion thanks to their large feet and soft soles.

Cabesi has provided the necessary knowledge and training for camel care. 25 camels were trained to carry loads and their owners were trained as camel drivers. Six men were trained in the medical treatment of sick camels.

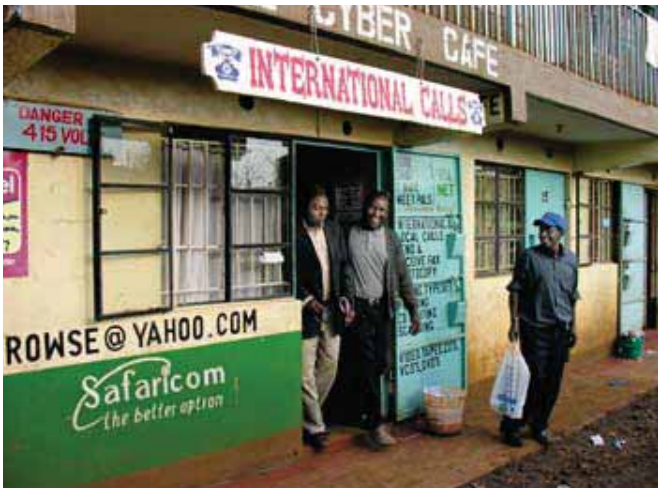
What has worked for the neighbouring areas has not worked for us. The camel has not yet been accepted as a beast of burden by the Pokot people. There are also cultural reasons for this. The use of mares to transport material is taboo in Pokot tradition. Fully-grown stallions were sometimes slaughtered or sold and trained animals were turned out for so long that they became half wild.

It is difficult for new ideas to find acceptance in rural cultures. And perhaps our approach was not optimally chosen. At least many Pokot have seen with their own eyes that camels are suited to being beasts of burden. Thanks to Cabesi, medical care for animals has improved and today there are more camels than before the project. We have not given up hope; the seed has been sown. Now it is up to the Pokot people to let it grow.

Mercy Kiyapyap

Infonet-Flash

Internet – for beginners too



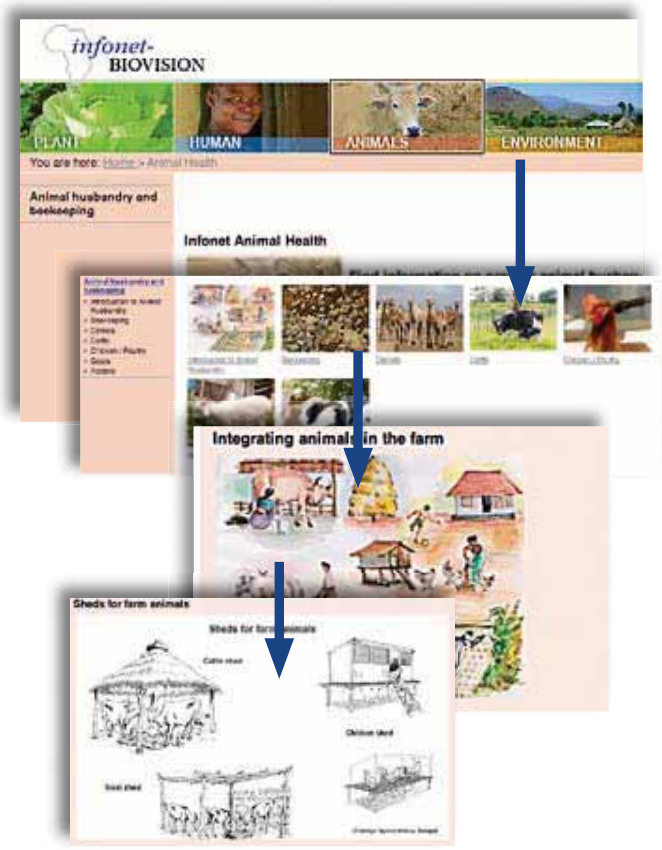
Modern communication technology established itself in Kenya long ago. Even in the smallest villages there are cyber-cafes with internet access for use by the public.

Monique Hunziker, head of the BioVision ‚Infonet' project recently received the following email: „I just wanted to quickly say how terrific your website is. I've just been looking through your diverse topics such as plant disease, soil cultivation, malaria and much more. We live in Zambia and it's difficult here to get information on diseases and plant pests. On your website I've finally found a wealth of tips on the prevention and cure of problems in the garden. Many thanks and best wishes. Sarah."

www.infonet-biovision.org offers scientifically proven information on the most common plant pests and disease specific to Africa, together with guidance on organic prevention measures. Target groups are farmers, agricultural advisers, teachers and goal-related organisations.

The information platform has enjoyed a growing profile since its launch in October 2007. The website is visited by 500 people every day from various African countries. The homepage is now even more clearly laid out. Even first-time users can quickly retrieve concrete information and advice on problems in the spheres of health and agriculture, and also on topics such as soil improvement, agroforestry and sustainable irrigation. This practical information with over 1000 photos and illustrations is now available on CD.

See for yourself! Visit
www.infonet-biovision.org



Insects

Protagonists in BioVision projects

Anopheles – the notorious malaria mosquito

Who doesn't recognise that insufferable buzzing that startles one at night, and does not stop until the mischief maker itself is stuck lifeless to the wall?

The six-millimeter long anopheles gambiae plays a prevailing role in the transmission of the malaria pathogen. They are easy to identify by their posture: Proboscis and body make a straight line which then angles at 45° to the horizontal.

After mating and insemination, the female needs a meal of human or animal blood so that the gametes can develop. Before the mosquito sucks the blood, it injects a secretion into the victim through its proboscis to diminish blood coagulation. This saliva can contain disease pathogens collected by the mosquito at its last feeding which can be transmitted through its bite to its next victim.

Hans Herren visits Councillor Doris Leuthard

In January a seminar on „Scarce natural resources“ took place at EVD in the presence of Councillor Doris Leuthard. Hans Rudolf Herren, president of the BioVision Foundation, director of the Millennium Institute and co-director of IAASTD emphasised in his talk the important role Switzerland plays in the implementation of the IAASTD World Agriculture Report. „Councillor Leuthard appeared interested if skeptical of our calls for a change of course in agriculture“, reflects Herren, „at the same time I greatly value the fact that the minister took the time to acquire a picture of the most important findings from our 1500 page long agricultural report.“

www.biovision.ch/iaastd

Swiss agricultural school as a model for Africa

Getachew Tikubet, BioVision project leader in Ethiopia, founded a model farm with an associated school in Addis Ababa. Last November he visited various training institutes in Switzerland. Dr. Getachew was particularly impressed with the practice-oriented agricultural training and advice centre in Landquart. ‚Plantahof' offers, among others, a course in organic farming. „This is exactly the type of knowledge dissemination we are striving for in Ethiopia“, enthuses Getachew, as he left our country full of new ideas and thirty kilos of Swiss teaching materials in his luggage.

www.biovision.ch/News

Getachew Tikubet visits agricultural training and advice centre, Plantahof, in Landquart. .

Did you know?

They speak over 60 languages in Kenya!

Many Swiss people speak two or more of the four helvetic languages and are proud of their local language diversity. But when compared with African countries, Switzerland's diversity seems quite modest. In Kenya, for example, they speak over 60 languages. 50 of those are native, and not just different dialects but individual languages that belong to their own ethnic groups. These differ extensively in their origin and their culture. The people of each ethnic group have their own history and often characteristic physical features.

English, which is the official language along with Kiswahili, belongs among the Kenyan languages as well as the languages of other African countries, Arabic and a few Indian languages spoken by Kenyans of Indian descent. In addition are two Arabic dialects and Hindi as immigrant languages.

Many people in Kenya speak one or two other national languages alongside their mother tongue; most in addition to both official languages Kiswahili and English. As a Swiss person one can only say ‚hats off!'

BioVision at the Solothurn Film Festival

Peter Baumgartner, editor of the BioVision farmers' newspaper in Africa The Organic Farmer is the chief subject of the documentary film Muzungu. Franz Schnyder accompanied him with a camera on many visits to his school in the slum and to farmers in Kenya. The result is an involved, colourful and emotional film, which was aired at the 44th Solothurn Film Festival.

Information on how to order the film DVD: ww.biovision.ch/Muzungu

Making an impact – leaving a mark

A legacy to help others

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A view to another life

Simon Odhiambo John Muga, 38
in Oboch Location
Kawere Village, Kenya

On the way home I always collect cow dung, so I can improve the soil on my shamba (farm). Previously, clay was quarried here for the famous Nyabondo bricks. When the brickmakers went away again there was nothing left but pockmarked clay subsoil where the rainwater collected. Now I know that malaria mosquitoes breed in these pools. My wife and I drained the water and improved the soil with compost and manure. Now splendid maize plants are growing there. I got essential tips on soil improvement from the farmers' newspaper The Organic Farmer. With the help of TOF, my daughter Susan and I began to keep chickens and rabbits. Since then we have meat for dinner every second Sunday!

Four years ago I started as a Mosquito Scout in the Stop Malaria project run by icipe * and BioVision. As a Mosquito Scout I describe the symptoms of malaria to the village people and try to persuade them to go straight to the doctor and not to the local healer. I also explain to them where the disease comes from. Our malaria problem is man-made – by the brickmakers.

Every Mosquito Scout is responsible for two of a total of 30 areas. After the early morning work on my shamba I inspect existing mosquito breeding sites in my areas and look out for new ones. In area 6 there are currently ten, in area 8 there are seven. At every site I take five water samples with a scoop, count the mosquito larvae swimming in them and determine the species and stage of development. The larvae of the anopheles mosquito, which transmits malaria, lie or swim high up in the water. The larvae of the harmless culex mosquito on the other hand, lie on the surface of the water with their heads pointing downwards. After I have dealt with the pupae, I write down all results in my data sheets, which are later analysed by icipe insect specialists. This way they get important information on the mosquito population in our region.

I am also responsible for two mosquito traps. The mosquitoes are attracted by the weak light of battery powered lamps and sucked into a nylon sack by the air from a fan. Later, experts determine the age of the captured mosquitoes and investigate if they are carrying the malaria pathogen. From this they get a picture of the degree of danger for the population and can take timely countermeasures – with the distribution of impregnated bed nets or the treatment of large breeding sites with environmentally friendly Bti, which kills the larvae without damaging the environment.

I got essential tips on soil improvement from the farmers' newspaper *The Organic Farmer.*

I value my work as a Mosquito Scout, because I am serving the community and earning an additional income. Life has become much more difficult since food prices have gone up. Because of this we must put our wish for a second child on hold. We wouldn't be able to feed it. That hurts. We had a second daughter, her name was Jane. She died aged two. When she suddenly got a fever and started to cough violently, I first thought of malaria. But the nurse at the health centre said it was pnuemonia and gave her medicine. But it was already too late. A few hours after we had returned to the house, Jane died. We couldn't do anything. It was awful...but that's how it is here. Life goes on.

Recorded in October 2008 by Peter Lüthi in Oboch Location, Kenya

Hope for Africa!

BIOVISION

Thank you for your donation PC-Konto 87-193093-4

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