


## "Women's Risk"

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### Outline

- ✓ Agenda 21 and Sustainable agriculture
- ✓ Gender implication on Pesticides use
- ✓ Health effects
- ✓ Current problems and ways for solution
- ✓ Ukraine and pesticides problems
- ✓ SDERC activities
- ✓ Project in Poltava region
- ✓ Workshop in Kamenetz-Podilsky
- ✓ Conclusion

### Sustainable agriculture

- ✓ Agenda 21 clearly highlights the importance of agricultural policies to reduce pesticide use and exposure to pesticides and focuses on promotion of sustainable agriculture
- ✓ Agenda 21 gives special consideration to women's role in sustainable development and stresses an importance of public participation
- ✓ Further documents including Johannesburg documents stress the urgent need to implementation of sustainable agriculture approaches

### WHAT HAS BEEN DONE TOWARDS SUSTAINABILITY IN AGRICULTURE?

- Land Protection
- Reducing pesticides use
- Integrated Pest Management and Biocontrol
- Organic farming



### Chapter 14 Agenda 21

- ✓ Role of governments in dissemination information about "reduced use of agricultural chemicals"
- ✓ Increasing public awareness of sustainable agriculture in women's groups
- ✓ Necessity of trainings in alternative ways of controlling pests
- ✓ Issues of women as consumers of pesticide products



### Role of women in agriculture labor force

- Women labor force is now accounting for 43% of the total workforce in agriculture
- the share of women in agricultural employment world wide is growing in recent years, mainly due to the migration of men to urban centers seeking better opportunities
- women farmers and workers frequently are exposed to dangerous pesticides directly when working as pesticide applicators, or indirectly during harvesting, planting and soil preparation

## Gender implication of Pesticide Use



- Women are exposed to pesticides not only through agricultural activities but also from exposures in forestry, lawn and garden
- Women are exposed taking care of agricultural house or "dacha" using different chemical reagents against insects, or small gnawers
- Women are exposed to pesticides in workplaces and in public spaces
- Women come into contact with pesticides through washing pesticide-soaked clothes and disposing of empty containers from family members
- women may be exposed to pesticides residues involuntarily through the food

## Women and agriculture in Ukraine



- Women constitute the majority (54%) of the rural population in
- Women play an important role in agricultural labor force
- Women's wages are only 70% of that of men
- More poor households are headed by women
- More than 43% of rural unemployed are women
- Only 5% of women with higher education work as directors of agricultural farms while within similarly educated men up to 50% hold same position
- Employment conditions are worse for women, who undertake 65% of agricultural labor on private farms
- Including their domestic responsibilities, women in rural communities work around 16 hours/day

## Women and agriculture in Ukraine



- ✓ Ukrainian women, especially those in rural areas are most affected by environmental degradation
- ✓ These women are primary those who dig land contaminated by the radionuclide and pesticides residue soils, in order to grow potatoes (second Ukrainian bread)
- ✓ in Western Ukraine over 35% of men are working abroad and women are responsible for buying and using pesticides
- ✓ Ukrainian women as was found out from sociological very often are involved in pesticide application
- ✓ Exposure is routine: little attention is paid to occupational risk factors

## Results of survey of 50 women on risk that pesticide poses for health, Boryshanka, Kyiv region, 2001

	Yes (%)	No (%)	Not sure (%)
Do you think pesticides are seriously injuring your health?	13 (26)	27 (54)	10 (20)
Have you observed any illness due to pesticide exposure?	5 (10)	41 (82)	4 (8)
Do you know the health effects caused by pesticide exposure?	15 (30)	25 (50)	10 (20)
Is it important to wear protective clothing?	23 (46)	16 (32)	11 (22)
If faced with an a serious pest threat to harvest, is it justifiable to use an obsolete pesticide:	42 (84)	6 (12)	2 (4)

## Health Effects



- Pesticides pose health risks for women
- Accidental pesticide poisoning causes 20,000 deaths and 1 million cases of illness per year worldwide
- Pesticides have been implicated in human studies with leukemia, lymphoma, anemia, soft tissue sarcoma and cancers of the breast, brain, prostate
- The International Agency for Research on Cancer has found "sufficient" evidence of carcinogenicity in eighteen pesticides and "limited" evidence in an additional sixteen pesticides




- Health problems attributable to pesticide exposure usually stem from accidents rather than from using pesticides according to label instructions
- Most health concerns associated with pesticides tend to center on potential long term effects that would be difficult to attribute to specific products



**We must focus on preventing long term effects rather than seeking redress or medical attention after the fact**

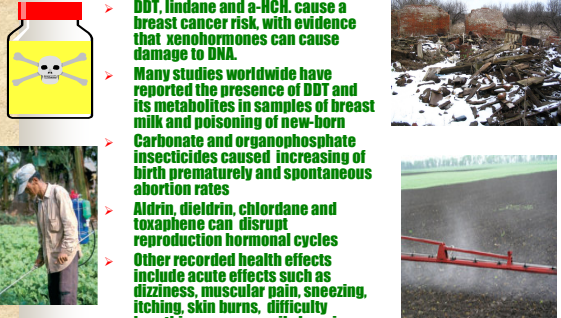
## Health Effects

- Studies have documented increased incidence of miscarriages, stillbirths and delayed pregnancy among women who are agricultural workers and wives of men employed in pesticide mixing and spraying
- Evidence exists of increased risk of birth defects from parental exposure to pesticides
- Specific herbicides, such as 2,4-D and 2,4,5-T, disrupt estrogen cycles in women



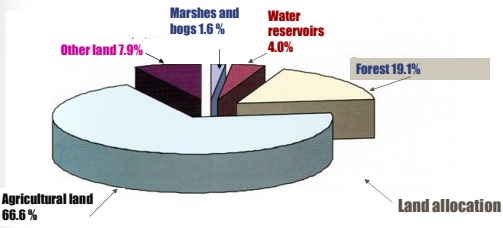
## Health Effects

- DDT, lindane and a-HCH, cause a breast cancer risk, with evidence that xenohormones can cause damage to DNA.
- Many studies worldwide have reported the presence of DDT and its metabolites in samples of breast milk and poisoning of new-born
- Carbonate and organophosphate insecticides caused increasing of birth prematurely and spontaneous abortion rates
- Aldrin, dieldrin, chlordane and toxaphene can disrupt reproduction hormonal cycles
- Other recorded health effects include acute effects such as dizziness, muscular pain, sneezing, itching, skin burns, difficulty breathing, nausea, nail changing color and sore eyes



## Ukraine's Agriculture

- ✓ 67% of the total territory (80% of farmlands) has been cultivated
- ✓ Agriculture causes 35% of the total environmental degradation, including land erosion, land and water contamination by pesticides, fertilizers and products of their decomposition, loss of biodiversity




Category	Percentage
Agricultural land	66.6%
Forest	18.1%
Other land	7.0%
Marshes and bogs	1.6%
Water reservoirs	4.0%

## The situation was greatly exacerbated by the Chernobyl Catastrophe



## Agricultural pressure on human well-being

- Agricultural pressures, pressure of economy transition as well as consequences of Chernobyl catastrophe contribute to the deterioration of health of Ukrainian population and to negative demographic change
- Depopulation in rural area started in 1982, ten years earlier than in urban area



Year	Народжуваність (Birth rate)	Смертність (Mortality rate)	Природний приріст (Natural growth)
1966	~18	~10	~8
1970	~17	~10	~7
1974	~16	~10	~6
1978	~15	~10	~5
1982	~14	~10	~4
1986	~13	~10	~3
1990	~12	~10	~2
1994	~11	~10	~1
1998	14.3	8.3	6.0

## Pesticide's risk to health: Ukraine

- Information on pesticide poisoning in Ukraine is notoriously under-estimated, and no regular monitoring of impacts has been carried out
- The most widely used herbicide is 2,4-D, which has been identified as an endocrine disrupting chemical
- A significant proportion of hormone disrupting pesticides, including pyrethroids and carbamates are used
- Researches carried out in 259 agricultural rayon across former SU in 90<sup>th</sup>. The number of children's morbidity was in two times higher in pesticide's contaminated area where loan of pesticides was in 6-7 higher



## Pesticide Use in Ukraine

**Past practices**


- ✓ 1986-1989 – period of most intensive application (organochlorines)
- ✓ Application rate - 3-4 kg/ha of arable land

**Current practices**

- ✓ Pesticide production/use - dropped significantly in 1990s
- ✓ Current application rate – 0.7-1 kg/ha of arable land
- ✓ 11% of cultivated land is polluted by pesticide residues

## Obsolete pesticides

**Obsolete pesticides:**  
 forbidden identified pesticides  
 obsolete pesticides cannot be used because of determination mixture of pesticides and other agrochemicals



- ✓ Total stocks of obsolete pesticides exceed 22,000 tonnes and are found in 25 regions. OP are stored in over 5000 different places across Ukraine. No regular monitoring of impact of OP to human health has been carried out

## Current problems

- ✓ Agriculture tends not to be a subject to comprehensive international standard
- ✓ Regulations are often sporadically applied due to inadequate legal provisions, and insufficient labor inspection
- ✓ Most users do not use protective clothing and pesticides are stored in houses easily accessible to family areas
- ✓ Rural women have fewer opportunities to organize themselves, and are often powerless to control resources
- ✓ Many women in rural communities are unaware of an adverse effects of pesticide use and little understanding exists about specific negative impact to health

## Solution of problems

- Importance of education
- Importance of training program
- Increasing awareness
- Importance of capacity building at the local level
- Importance of experience exchange between Eastern and Western countries and sharing knowledge among NGOs and local government



**Ukrainian women can take the lead activities regarding protection of the environment and promotion sustainable agriculture!!!**

## Case of Center for Sustainable Development and Ecological Education

- lack of NGOs focused on promotion of sustainable agriculture and strengthening ecological education at rural communities
- Center was founded in 1999 in order to disseminate principles of sustainable development in Ukraine and to initiate capacity building
- Centre works together with different stakeholders: public and local governmental officials and private sector



### Main SDEEC's activities

- promotion sustainable development and ESD in Ukraine
- analyze of impact on society ecological, social and economic problems in the framework of sustainable development
- activities regarding pesticide reduction as a primary principal of sustainable agriculture
- elaboration and practical implementation of the educational programs and training's programs, courses with elements of sustainable development
- introduction of sustainable agricultural practices via informal education

### Rural community a Poltava region

#### Public awareness and elimination of risk poses by Obsolete Pesticide

- ✓ Capacity building of local NGO
- ✓ Monitoring of local obsolete pesticide's storage
- ✓ Two workshops and training program

### Results of survey 30 people in Poltava region, fall 2004

	Yes (%)	No (%)	Not sure (%)
Do you think pesticides are seriously injuring your health?	30	45	25
Have you observed any illness due to pesticide exposure?	40	40	20
Do you know the health effects caused by pesticide exposure?	50	30	20
Is it important to wear protective clothing?	50	30	20
If faced with an a serious pest threat to harvest, is it justifiable to use an obsolete pesticide:	75	15	10

**People were not strongly concerned with pesticide exposure that time!**

### Results of pool of 33 people in Poltava region, spring 2005

	Yes (%)	No (%)	Not sure (%)
Do you think pesticides are seriously injuring your health?	85 (+55)	10	5
Have you observed any illness due to pesticide exposure?	70 (+30)	15	15
Do you know the health effects caused by pesticide exposure?	70 (+20)	20	10
Is it important to wear protective clothing?	65 (+15)	20	25
If faced with an a serious pest threat to harvest, is it justifiable to use an obsolete pesticide:	30 (-45)	60	10

**The attitude to pesticide's poisoning is fully different because of (a) strengthening education component, and (b) awareness raising**

### Cleaning one obsolete pesticides storage by local citizens, Poltava region

### Soil contamination near Obsolete Pesticide's storages in Poltava region ( data in mg/kg) \*

	Distance from storage	4,4'-DDE	4,4'-DDT	2,4'-DDT	4,4'-DDD	Sum of metabolites	p-HCH	γ-HCH	β-HCH	Sum of HCH
Storage number 1	1m	0.064	0.060	-	0.005	0.129	-	-	-	-
	5m	0.075	0.084	-	-	0.159	-	-	0.018	0.018
	Inside storage	0.046	0.139	-	0.027	0.212	-	0.010	0.046	0.056
Storage number 2	1m	2.512	19.954	29.917	0.395	52.778	-	-	-	-
	5m	1.170	307.190	24.300	4.188	307.190	0.390	0.300	-	0.690
	Inside storage	2.449	94.947	103.620	3.323	207.339	0.074	0.041	-	0.115

\* Samples were tested by Dr.Mokiyachuk, Institute of Agroecology, Kyiv, Ukraine



**Workshop Sustainable solutions for pesticide's problems in Eastern Europe**







*Kamenetz-Podilsky, Ukraine, June 16-18, 2005*

**AGENDA**

- Local initiatives in Oboloto pesticides management in Kamenetz-Podilsky, Ukraine and cooperation between local government and NGOs.
- International standards of "Good Agricultural Practice" (GAP) and the way towards Best Agricultural Practice"







- ✓ Organic farming as alternative to conventional agriculture
- ✓ Pesticide Use Reduction in Europe-Policy and NGO activities
- ✓ Introduction of sustainable agriculture





- ✓ National Action Plan: experience from Moldova
- ✓ Role of public in pesticides reduction: sharing experience from Western to Eastern Europe"
- ✓ Towards Integrated Monitoring System of Pesticides
- ✓ Role of education in elimination an environmental and health risks





**Call for Action**

from the participants of the international workshop

**"Sustainable solutions for pesticides problems in Eastern Europe"**

Kamyanets-Podilsky  
18 June 2005




**Conclusions**

- Local and regional pesticides actions and management strategies need be developed and implemented
- More research on the impacts of pesticides on women's health
- Local organizations need to be further strengthened to continue the work that has already begun
- Women's groups need additional resources including more information, training and financial backing
- More development programs and sharing experience workshops for NIS countries and twin-twin partners (Western-Eastern European countries) need to be initiated and supported
- Supporting the local initiatives in pesticides management and alternative agriculture having a strength cooperation between NGOs and local government

*Full and equal participation of women in sustainable agriculture and environmental policy and gender mainstreaming of the policy and implementation will have a positive effects on the quality and effectiveness of policy making and real accomplishment s especially in NIS countries!!!*

## **Acknowledgement**

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**Thanks for invitation to the Annual PAN Conference in Poland**



**Thank you for attention !**